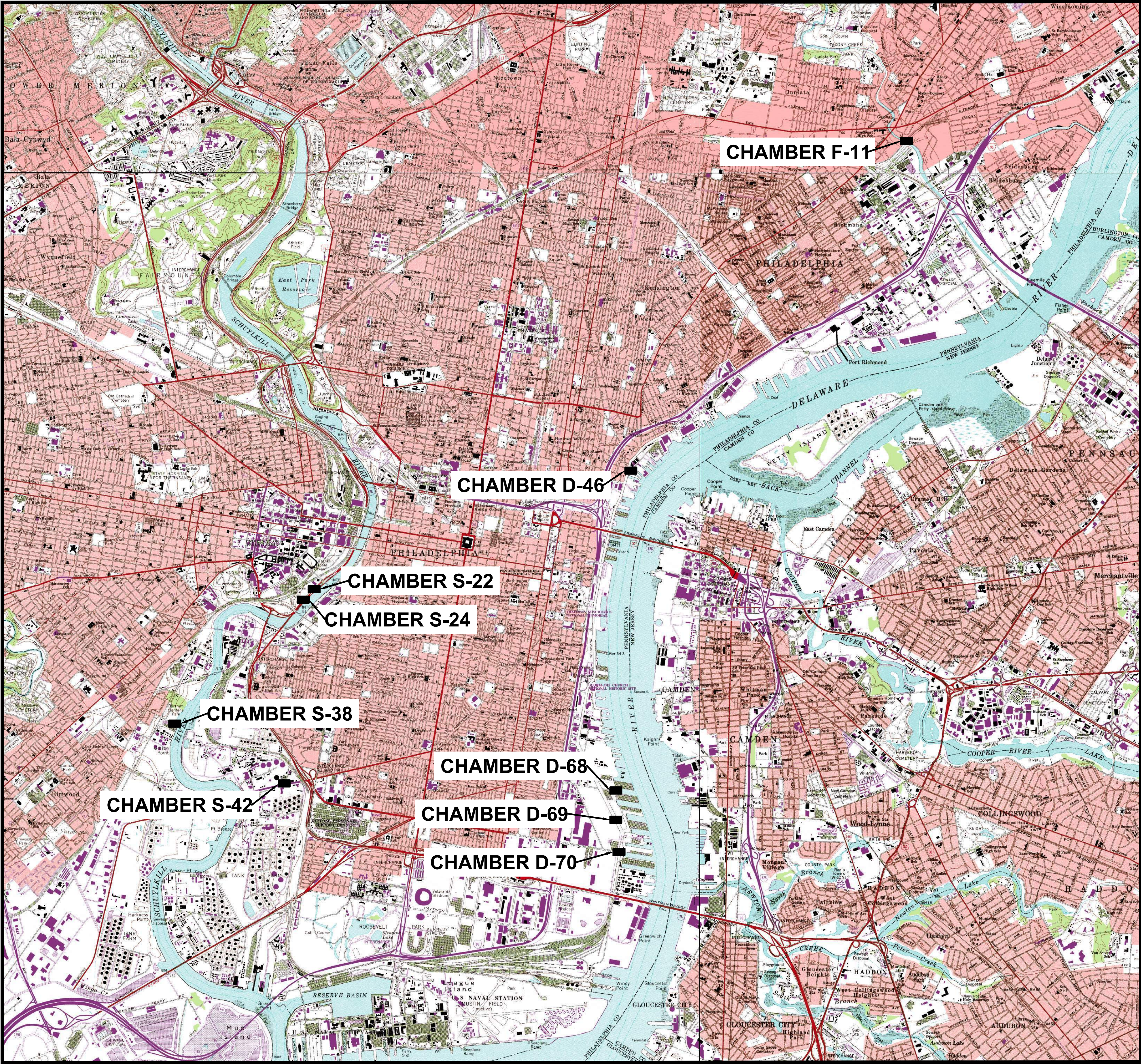


CITY OF PHILADELPHIA

TIDE GATES REPLACEMENT PROJECT



SOURCE: USGS QUADRANGLE – PHILADELPHIA
SCALE: 1" = 750'

SHEET INDEX	
SHEET NO.	DESCRIPTION
T-1	TITLE AND LOCATION PLAN
S-1	SEWER - REGULATING CHAMBER D-46
S-2	SEWER - REGULATING CHAMBER D-68
S-3	SEWER - REGULATING CHAMBER D-69
S-4	SEWER - REGULATING CHAMBER D-70
S-5	SEWER - REGULATING CHAMBER F-11
S-6	SEWER - REGULATING CHAMBER S-22
S-7	SEWER - REGULATING CHAMBER S-24
S-8	SEWER - REGULATING CHAMBER S-38
S-9	SEWER - REGULATING CHAMBER S-42
ST-1	REGULATING CHAMBER D-46 DEMOLITION PLANS AND SECTIONS
ST-2	REGULATING CHAMBER D-46 REPAIR PLANS AND SECTIONS
ST-3	REGULATING CHAMBER D-68 DEMOLITION PLANS AND SECTIONS
ST-4	REGULATING CHAMBER D-68 REPAIR PLANS AND SECTIONS
ST-5	REGULATING CHAMBER D-69 DEMOLITION PLANS AND SECTIONS
ST-6	REGULATING CHAMBER D-69 REPAIR PLANS AND SECTIONS
ST-7	REGULATING CHAMBER D-70 DEMOLITION PLANS AND SECTIONS
ST-8	REGULATING CHAMBER D-70 REPAIR PLANS AND SECTIONS
ST-9	REGULATING CHAMBER F-11 DEMOLITION PLANS AND SECTIONS
ST-10	REGULATING CHAMBER F-11 REPAIR PLANS AND SECTIONS
ST-11	REGULATING CHAMBER S-22 DEMOLITION PLANS AND SECTIONS
ST-12	REGULATING CHAMBER S-22 REPAIR PLANS AND SECTIONS
ST-13	REGULATING CHAMBER S-24 DEMOLITION PLANS AND SECTIONS
ST-14	REGULATING CHAMBER S-24 REPAIR PLANS AND SECTIONS
ST-15	REGULATING CHAMBER S-38 DEMOLITION PLANS AND SECTIONS
ST-16	REGULATING CHAMBER S-38 REPAIR PLANS AND SECTIONS
ST-17	REGULATING CHAMBER S-42 DEMOLITION PLANS AND SECTIONS
ST-18	REGULATING CHAMBER S-42 REPAIR PLANS AND SECTIONS
ST-19	TYPICAL STRUCTURAL NOTES AND DETAILS
ST-20	TYPICAL STRUCTURAL DETAILS



PLAN PREPARED FOR THE
CITY OF PHILADELPHIA
WATER DEPARTMENT BY:

M
MOTT
MACDONALD



SEWER RECONSTRUCTION PROJECT TIDE GATE REPLACEMENT PROJECT

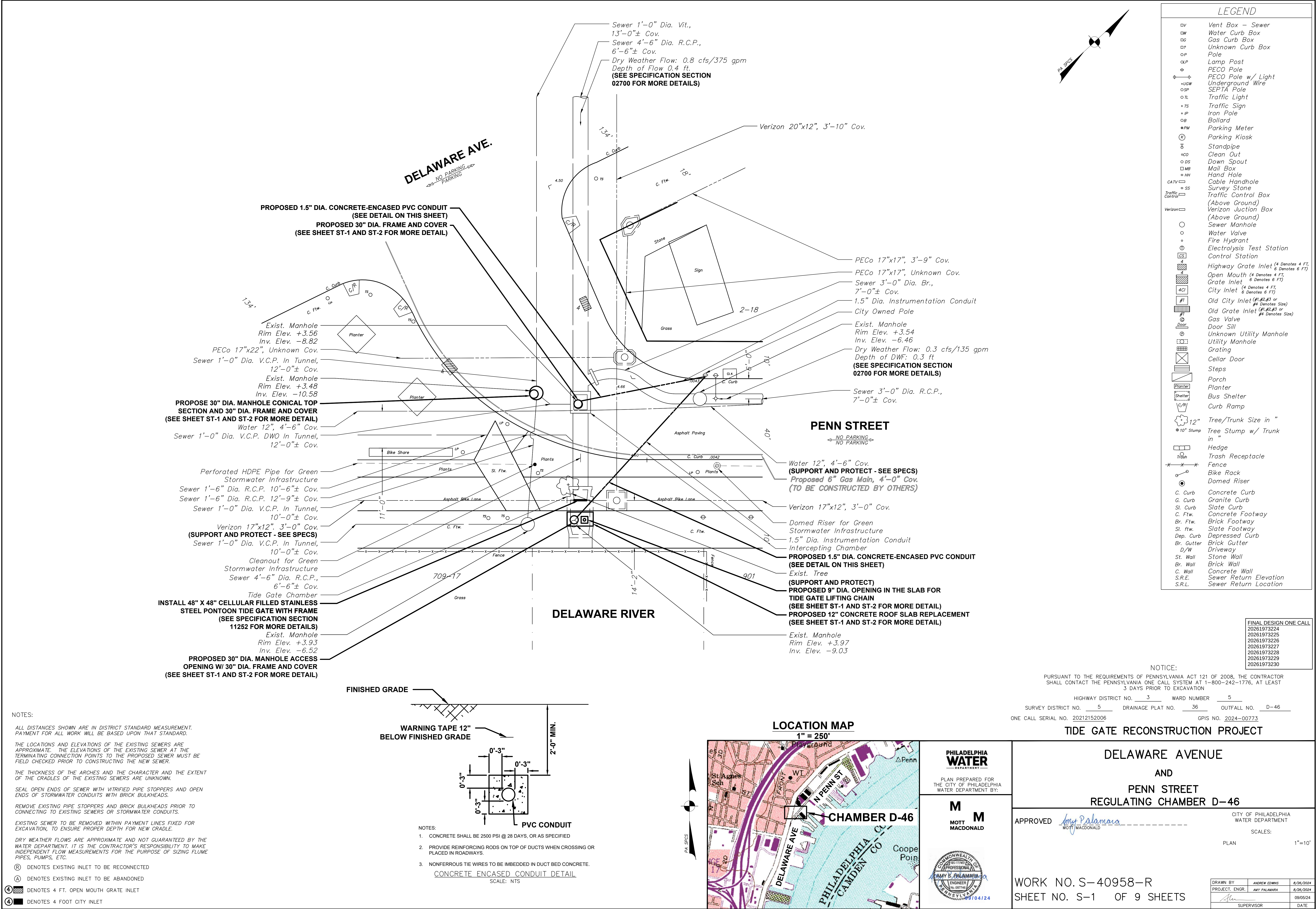
TITLE AND LOCATION PLAN

APPROVED Amy Palamara
MOTT MACDONALD
APPROVED William Dobbins
DEPUTY COMMISSIONER ENGINEERING
APPROVED [Signature]
WATER COMMISSIONER

CITY OF PHILADELPHIA
WATER DEPARTMENT
SCALES:
PLAN AS SHOWN
PROFILE HORZ.
VERT.
SECTION

WORK NO. S-40958-R
SHEET NO. T-1 OF 1 SHEETS

DRAWN BY	M. KLEIN	08/26/2024
PROJECT ENGR.	A. PALAMARA	08/26/2024
SUPERVISOR	[Signature]	09/05/24
DATE		



LEGEND	
OV	Vent Box - Sewer
DW	Water Curb Box
OG	Gas Curb Box
OP	Unknown Curb Box
OP	Pole
OLP	Lamp Post
OP	PECO Pole
+UGW	PECO Pole w/ Light
OSP	Underground Wire
OTL	SEPTA Pole
OTL	Traffic Light
TS	Traffic Sign
IP	Iron Pole
OB	Bollard
PM	Parking Meter
PK	Parking Kiosk
SP	Standpipe
CO	Clean Out
DS	Down Spout
MB	Mail Box
HH	Hand Hole
CATV	Cable Handhole
SS	Survey Stone
Traffic Control	Traffic Control Box
Verizon	Verizon Junction Box (Above Ground)
	Sewer Manhole
	Water Valve
	Fire Hydrant
	Electrolysis Test Station
	Control Station
	Highway Grate Inlet (4 Denotes 4 FT, 6 Denotes 6 FT)
	Open Mouth (4 Denotes 4 FT, 6 Denotes 6 FT)
	Grate Inlet (4 Denotes 4 FT, 6 Denotes 6 FT)
	City Inlet (4 Denotes 4 FT, 6 Denotes 6 FT)
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	Gas Valve
	Door Sill
	Unknown Utility Manhole
	Utility Manhole
	Grating
	Cellar Door
	Steps
	Porch
	Planter
	Bus Shelter
	Curb Ramp
	Tree/Trunk Size in "
	Tree Stump w/ Trunk in "
	Hedge
	Trash Receptacle
	Fence
	Bike Rack
	Domed Riser
C. Curb	Concrete Curb
G. Curb	Granite Curb
Sl. Curb	Slate Curb
C. Ftw.	Concrete Footway
Br. Ftw.	Brick Footway
Sl. ftw.	Slate Footway
Dep. Curb	Depressed Curb
Br. Gutter	Brick Gutter
D/W	Driveway
St. Wall	Stone Wall
Br. Wall	Brick Wall
C. Wall	Concrete Wall
S.R.E.	Sewer Return Elevation
S.R.L.	Sewer Return Location

NOTES:

ALL DISTANCES SHOWN ARE IN DISTRICT STANDARD MEASUREMENT. PAYMENT FOR ALL WORK WILL BE BASED UPON THAT STANDARD.

THE LOCATIONS AND ELEVATIONS OF THE EXISTING SEWERS ARE APPROXIMATE. THE ELEVATIONS OF THE EXISTING SEWER AT THE TERMINATING CONNECTION POINTS TO THE PROPOSED SEWER MUST BE FIELD CHECKED PRIOR TO CONSTRUCTING THE NEW SEWER.

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EXISTING SEWER TO BE REMOVED WITHIN PAYMENT LINES FIXED FOR EXCAVATION, TO ENSURE PROPER DEPTH FOR NEW CRADLE.

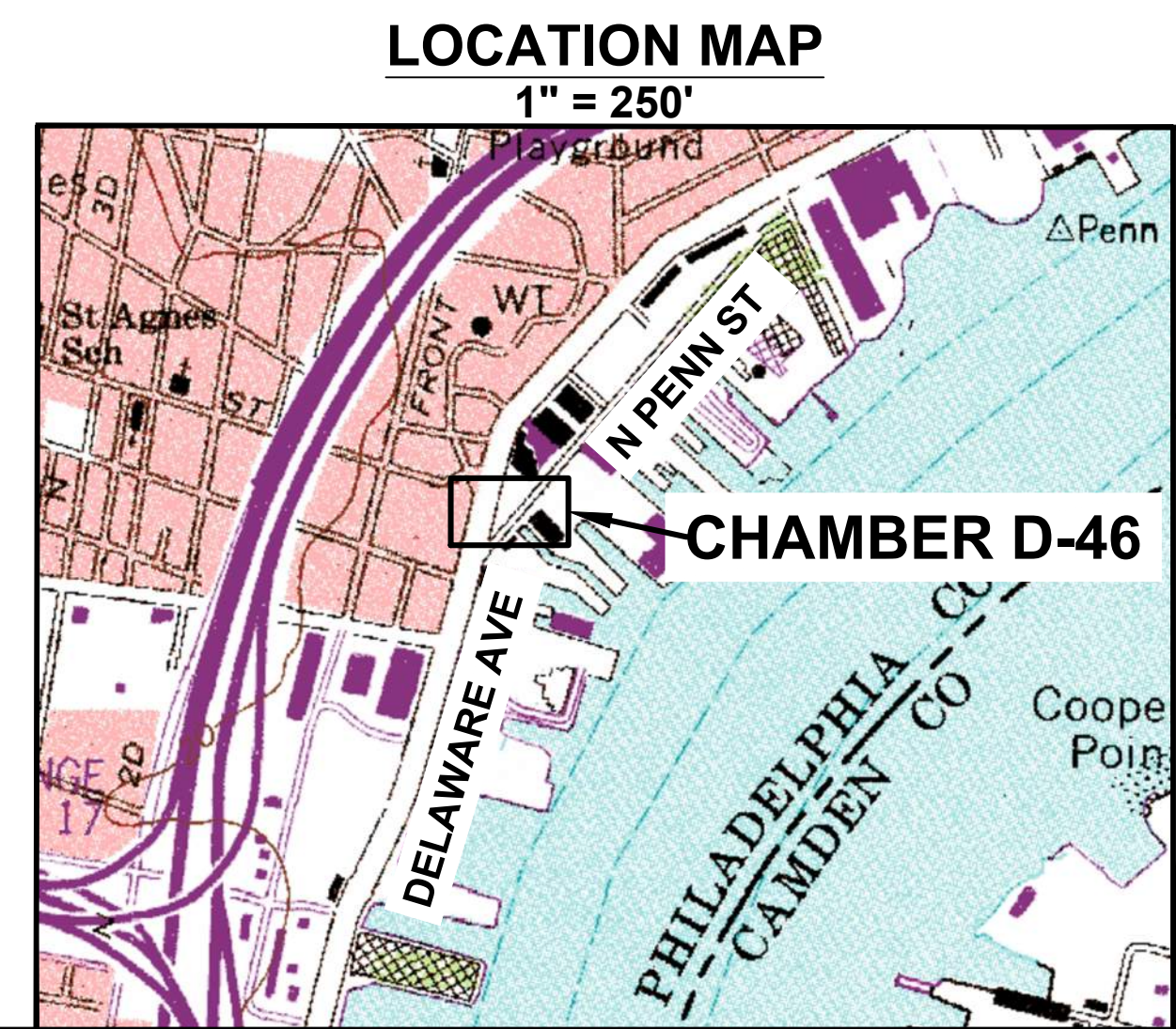
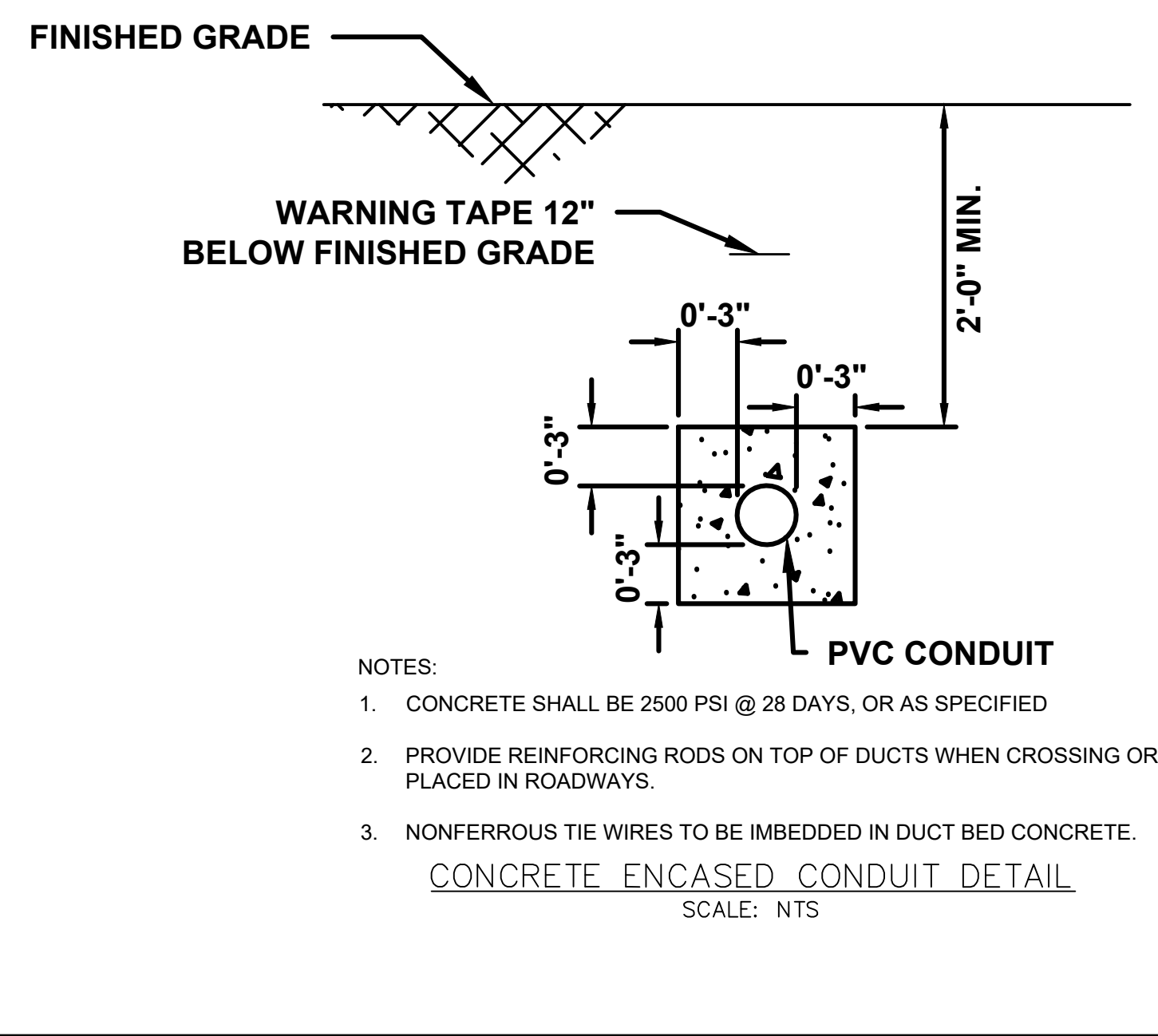
DRY WEATHER FLOWS ARE APPROXIMATE AND NOT GUARANTEED BY THE WATER DEPARTMENT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAKE INDEPENDENT FLOW MEASUREMENTS FOR THE PURPOSE OF SIZING FLUME PIPES, PUMPS, ETC.

Ⓡ DENOTES EXISTING INLET TO BE RECONNECTED

Ⓐ DENOTES EXISTING INLET TO BE ABANDONED

4 DENOTES 4 FT. OPEN MOUTH GRATE INLET

4 DENOTES 4 FOOT CITY INLET



PHILADELPHIA WATER DEPARTMENT

PLAN PREPARED FOR THE CITY OF PHILADELPHIA WATER DEPARTMENT BY:

MOTT MACDONALD

COMMONWEALTH OF PENNSYLVANIA PROFESSIONAL ENGINEER NO. 007718 09/04/24

NOTICE:

PURSUANT TO THE REQUIREMENTS OF PENNSYLVANIA ACT 121 OF 2008, THE CONTRACTOR SHALL CONTACT THE PENNSYLVANIA ONE CALL SYSTEM AT 1-800-242-1776, AT LEAST 3 DAYS PRIOR TO EXCAVATION.

HIGHWAY DISTRICT NO. 3 WARD NUMBER 5

SURVEY DISTRICT NO. 5 DRAINAGE PLAT NO. 36 OUTFALL NO. D-46

ONE CALL SERIAL NO. 20212152006 GPS NO. 2024-00773

TIDE GATE RECONSTRUCTION PROJECT

DELAWARE AVENUE AND PENN STREET REGULATING CHAMBER D-46

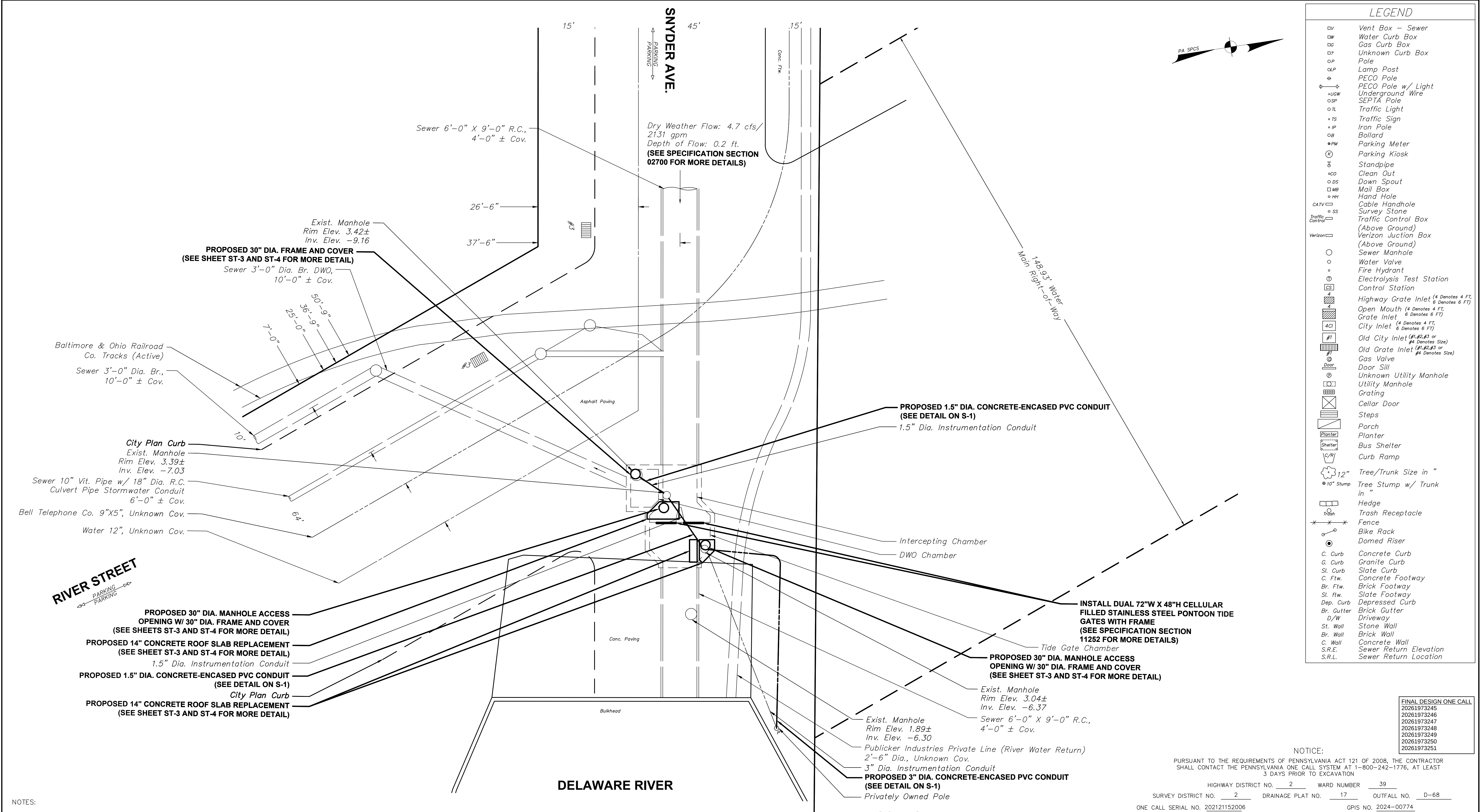
APPROVED Amy Palamara MOTT MACDONALD

CITY OF PHILADELPHIA WATER DEPARTMENT

SCALES: PLAN 1"=10'

WORK NO. S-40958-R SHEET NO. S-1 OF 9 SHEETS

DRAWN BY	ANDREW EDWINS	8/26/2024
PROJECT ENGR.	AMY PALAMARA	8/26/2024
SUPERVISOR		09/05/24
DATE		



LEGEND	
DV	Vent Box - Sewer
DW	Water Curb Box
DC	Gas Curb Box
DP	Unknown Curb Box
OP	Pole
OLP	Lamp Post
⊙	PECO Pole
⊙UGW	PECO Pole w/ Light
⊙SP	Underground Wire
⊙TL	SEPTA Pole
⊙	Traffic Light
⊙TS	Traffic Sign
⊙IP	Iron Pole
⊙B	Bollard
⊙PM	Parking Meter
⊙	Parking Kiosk
⊙	Standpipe
⊙CO	Clean Out
⊙DS	Down Spout
⊙MB	Mail Box
⊙HH	Hand Hole
CATV	Cable Handhole
⊙SS	Survey Stone
Traffic Control	Traffic Control Box
Verizon	(Above Ground) Verizon Junction Box
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⊙	Water Valve
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⊙	Gas Valve
⊙	Door Sill
⊙	Unknown Utility Manhole
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⊙	Steps
⊙	Porch
⊙	Planter
⊙	Bus Shelter
⊙	Curb Ramp
⊙	Tree/Trunk Size in "
⊙	Tree Stump w/ Trunk in "
⊙	Hedge
⊙	Trash
⊙	Trash Receptacle
⊙	Fence
⊙	Bike Rack
⊙	Domed Riser
C. Curb	Concrete Curb
G. Curb	Granite Curb
Sl. Curb	Slate Curb
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Br. Ftw.	Brick Footway
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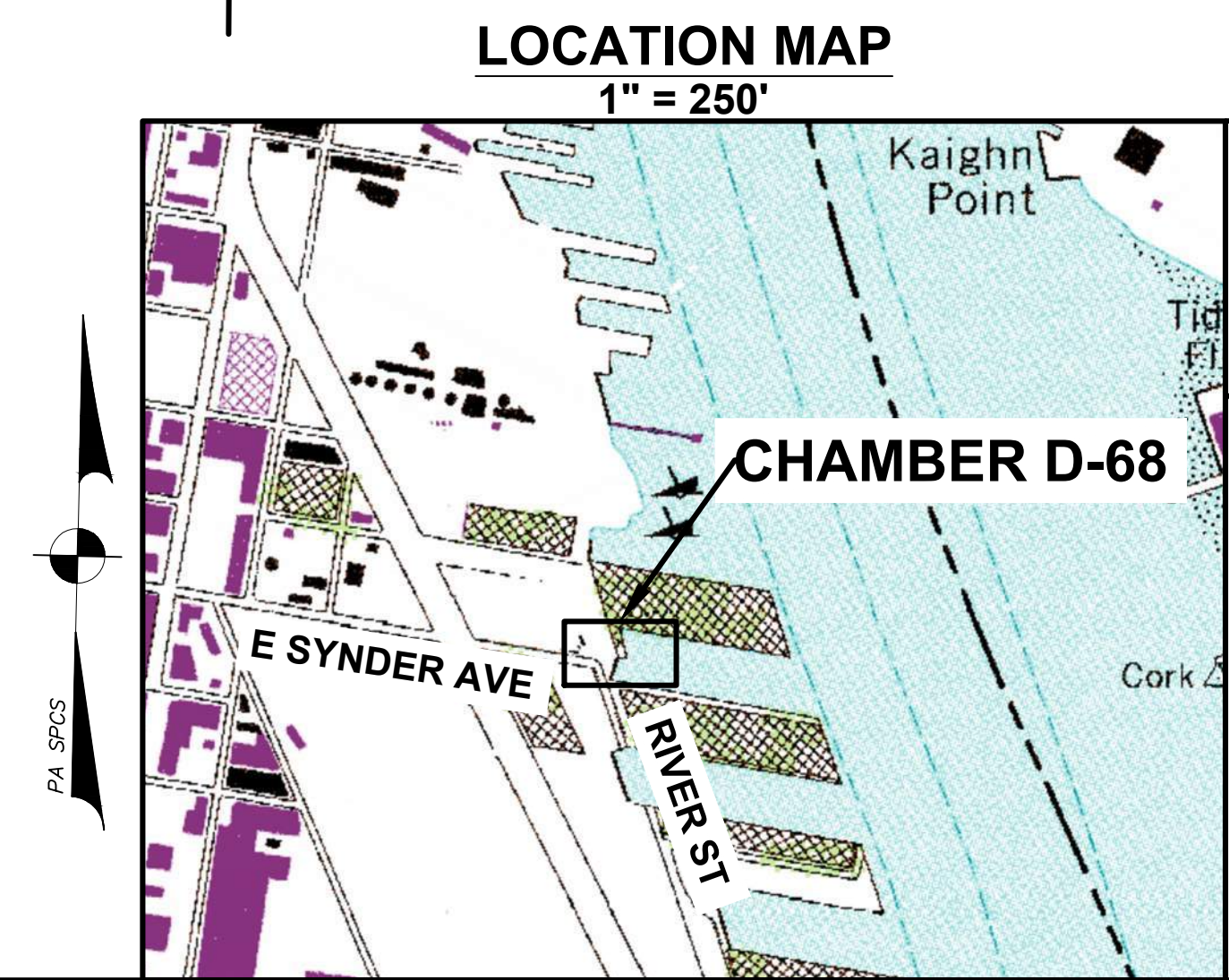
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Ⓡ DENOTES EXISTING INLET TO BE RECONNECTED

Ⓢ DENOTES EXISTING INLET TO BE ABANDONED

Ⓢ DENOTES 4 FT. OPEN MOUTH GRATE INLET

Ⓢ DENOTES 4 FOOT CITY INLET



PHILADELPHIA WATER DEPARTMENT

PLAN PREPARED FOR THE CITY OF PHILADELPHIA WATER DEPARTMENT BY:

M MOTT MACDONALD

COMMONWEALTH OF PENNSYLVANIA

REGISTERED PROFESSIONAL ENGINEER

NO. 00774

09/04/24

APPROVED *Amy Palamara*

CITY OF PHILADELPHIA WATER DEPARTMENT

SCALES:

PLAN 1"=10'

WORK NO. S-40958-R

SHEET NO. S-2 OF 9 SHEETS

DRAWN BY	ANDREW EDWARDS	8/26/2024
PROJECT ENGR.	AMY PALAMARA	8/26/2024
SUPERVISOR		09/05/24
DATE		

FINAL DESIGN ONE CALL

20261973245

20261973246

20261973247

20261973248

20261973249

20261973250

20261973251

NOTICE:

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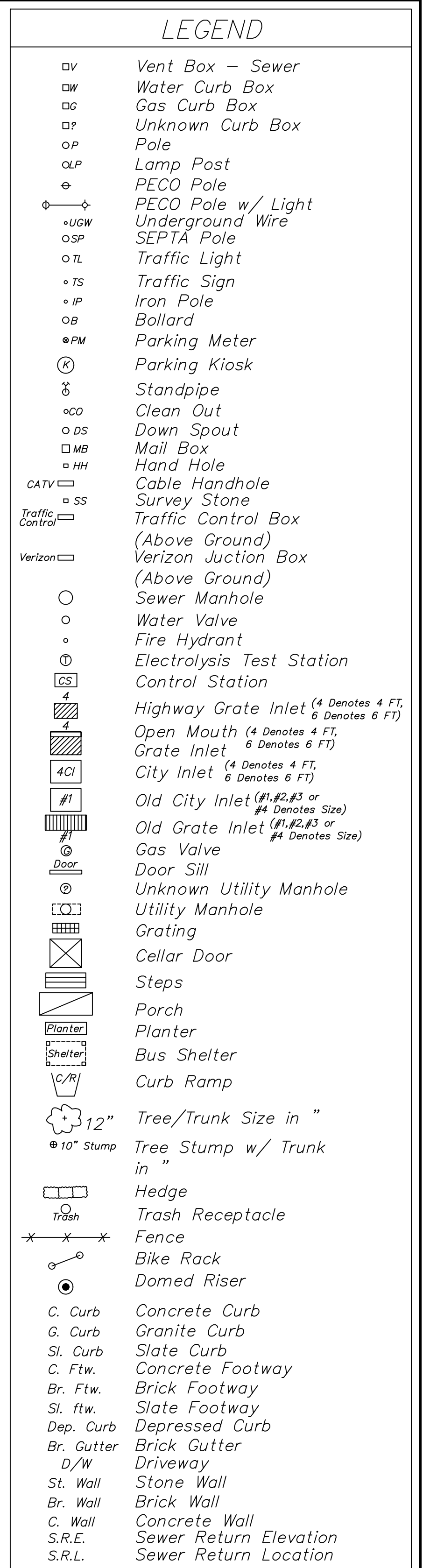
HIGHWAY DISTRICT NO. 2 WARD NUMBER 39

SURVEY DISTRICT NO. 2 DRAINAGE PLAT NO. 17 OUTFALL NO. D-68

ONE CALL SERIAL NO. 202121152006 GPS NO. 2024-00774

TIDE GATE RECONSTRUCTION PROJECT

E. SNYDER AVENUE AND RIVER STREET REGULATING CHAMBER D-68



FINAL DESIGN ONE CALL
20261973271
20261973272
20261973273
20261973274
20261973275
20261973276
20261973277

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HIGHWAY DISTRICT NO. 2 WARD NUMBER 39

SURVEY DISTRICT NO. 2 DRAINAGE PLAT NO. 17 OUTFALL NO. D-69

ONE CALL SERIAL NO. 202121152006 GPIS NO. 2024-00774

TIDE GATE RECONSTRUCTION PROJECT

CHRISTOPHER COLUMBUS BLVD. (S.R. 2001)
BETWEEN
E. OREGON AVE. (S.R. 2001) AND E. SNYDER AVE.
REGULATING CHAMBER D-69

APPROVED Amy Palamara
MOTT MACDONALD

CITY OF PHILADELPHIA
WATER DEPARTMENT

SCALES:

PLAN 1"=10'

WORK NO. S-40958-R
SHEET NO. S-3 OF 9 SHEETS

DRAWN BY	ANDREW EDWINS	8/26/2022
PROJECT. ENGR.	AMY PALAMARA	8/26/2022
		09/05/24
SUPERVISOR		DATE

NOTES:

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(R) DENOTES EXISTING INLET TO BE RECONNECTED

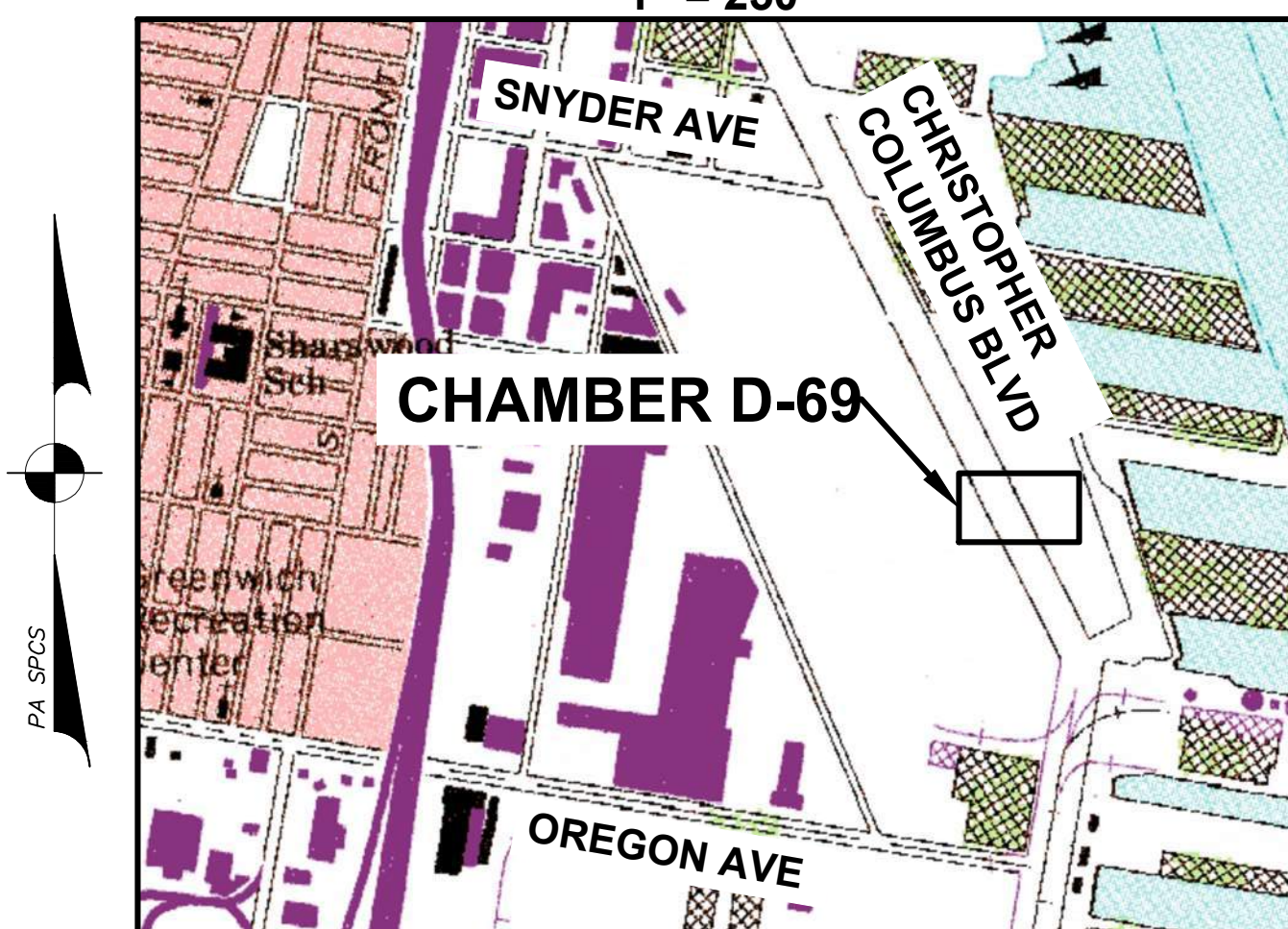
(A) DENOTES EXISTING INLET TO BE ABANDONED

④ DENOTES 4 FT. OPEN MOUTH GRATE INLET

④ ■ DENOTES 4 FOOT CITY INLET

LOCATION MAP

1" = 250'



PHILADELPHIA
WATER
— DEPARTMENT —

PLAN PREPARED FOR
THE CITY OF PHILADELPHIA
WATER DEPARTMENT BY:

M
M
MOTT
MACDONALD



NOTES:

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④ DENOTES 4 FT. OPEN MOUTH GRATE INLET

④ DENOTES 4 FOOT CITY INLET

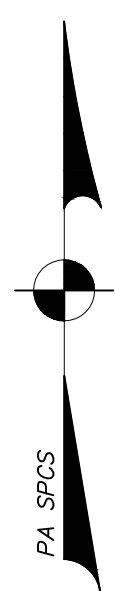
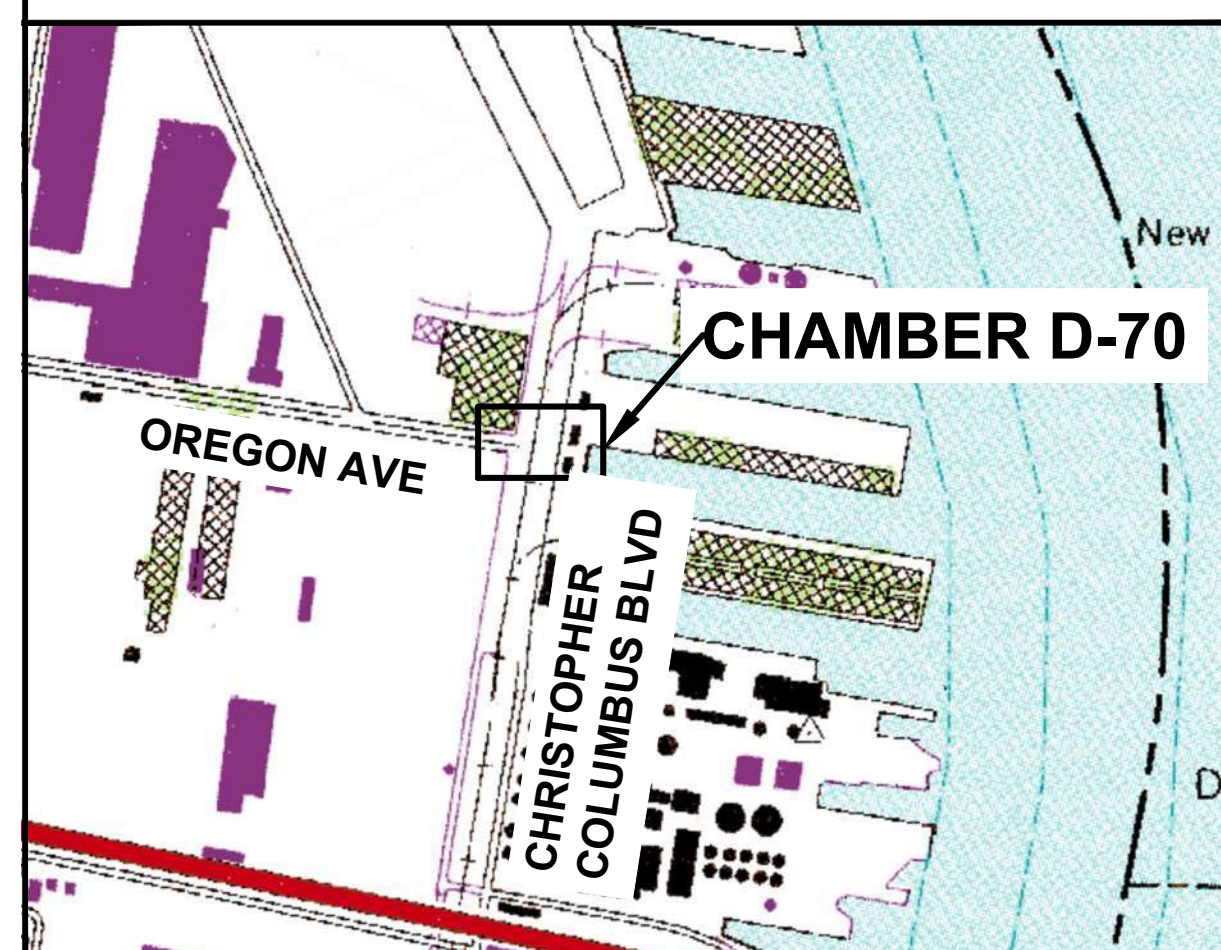
CHRISTOPHER COLUMBUS BLVD.
(S.R. 2001)

PARKING
NO PARKING

CHRISTOPHER COLUMBUS BLVD.
(S.R. 2001)

PARKING
PARKING

LOCATION MAP
1" = 250'



CHAMBER D-70

OREGON AVE.

CHRISTOPHER COLUMBUS BLVD.

NEW

D

PA SPCS

INSTALL DUAL 48"W X 72"H CELLULAR
FILLED STAINLESS STEEL PONTON TIDE
GATES WITH FRAME
(SEE SPECIFICATION SECTION
11252 FOR MORE DETAILS)

Twin Sewer 6'-6" X 9'-6" R.C.,
7'-0"± Cov.
Exist. Manhole
Rim Elev. 5.00±
Inv. Elev. -8.60

OREGON AVE.
(S.R. 2001)

Dry Weather Flow: 3.8 cfs/1701 gpm
Depth of Flow: 0.3 ft.
(SEE SPECIFICATION SECTION
02700 FOR MORE DETAILS)

Sewer 4'-0" Dia. R.C.P.,
10'-0"± Cov.
Sewer 24" Dia. R.C.P., Stub
PECo 30"x45", Unknown Cov.

Sewer 1'-8" Dia. C.I.,
12'-0"± Cov.
Exist. Manhole
Rim Elev. 4.83±
Inv. Elev. -16.25

PECo 18"x52", Unknown Cov.
Water 12", Unknown Cov.
PECo 38"x28", 2'-11" Cov.
PECo 17"x17", Unknown Cov.

Baltimore & Ohio Railroad
Co. Tracks (Active)

Exist. Manhole
Rim Elev. 4.87±
Inv. Elev. -12.88
PECo 38"x28", 2'-7" Cov.
Sewer 3'-0" Dia. Br.,
10'-0"± Cov.
Water 8", 4'-0" Cov.
Sewer 2'-6"x1'-8" Br.,
7'-6"± Cov.
Gas 4", 3'-2" Cov.
PECo 16"x16", 3'-0" Cov.

Water 8", 4'-0" Cov.
Sewer 1'-3" Dia. R.C.P.,
Unknown Cov.
PECo 16"x16", 3'-0" Cov.

3' Dia. Instrumentation Conduit
Gas 4", 4'-3" Cov.
PROPOSED 3" DIA. CONCRETE-ENCASED PVC CONDUIT
(SEE DETAIL ON S-1)
Tide Gate Chamber
Tide Gate Chamber

Existing Manhole
(For Pipe Tunnel)

Exist. Gov't
Pipe Tunnel

Conc. Bulkhead
Wood Stop

Exist. Manhole
Rim Elev. 3.85±
Inv. Elev. -5.75
PECo 16"x16", 3'-0" Cov.
Sewer 1'-8" Dia. C.I. DWO,
12'-0" Cov.
Sewer 3'-0" Dia. R.C.P.,
11'-0" Cov.
DWO Chamber

Exist. Manhole
Rim Elev. 4.87±
Inv. Elev. -10.03
ENLARGE DWO OPENING TO 2'-6" X
2'-6" (SEE SHEETS ST-7 AND ST-8
FOR MORE DETAILS)
1.5" Dia. Instrumentation Conduit
(SEE DETAIL ON S-1)

PROPOSED 1.5" DIA. CONCRETE-ENCASED PVC CONDUIT
(SEE DETAIL ON S-1)

Twin Sewer 6'-6" X 9'-6" R.C.,
7'-0"± Cov.

OREGON AVE.
(NOT LEGALLY OPEN)
NO PARKING
NO PARKING

PHILADELPHIA
WATER
DEPARTMENT

PLAN PREPARED FOR
THE CITY OF PHILADELPHIA
WATER DEPARTMENT BY:

M
MOTT
MACDONALD



CHRISTOPHER COLUMBUS BLVD. (S.R. 2001)

AND

OREGON AVENUE (S.R. 2001)
REGULATING CHAMBER D-70

APPROVED *Amy Palamara*
MOTT MACDONALD

CITY OF PHILADELPHIA
WATER DEPARTMENT

SCALES:

PLAN 1"=10'

WORK NO. S-40958-R
SHEET NO. S-4 OF 9 SHEETS

DRAWN BY	ANDREW EDWARDS	8/26/2024
PROJECT ENGR.	AMY PALAMARA	8/26/2024
SUPERVISOR		09/05/24
DATE		

LEGEND

Ⓡ	Vent Box - Sewer
Ⓢ	Water Curb Box
Ⓣ	Gas Curb Box
Ⓤ	Unknown Curb Box
Ⓥ	Pole
Ⓦ	Lamp Post
Ⓧ	PECO Pole
Ⓨ	PECO Pole w/ Light
Ⓩ	Underground Wire
ⓐ	SEPTA Pole
ⓑ	Traffic Light
ⓓ	Traffic Sign
ⓔ	Iron Pole
ⓕ	Bollard
ⓖ	Parking Meter
ⓗ	Parking Kiosk
ⓙ	Standpipe
ⓚ	Clean Out
ⓛ	Down Spout
ⓜ	Mail Box
ⓝ	Hand Hole
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⓳	Verizon Junction Box
⓴	(Above Ground)
⓵	Sewer Manhole
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⓸	Tree Stump w/ Trunk in "
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⓻	Fence
⓼	Bike Rack
⓽	Domed Riser
ⓖ	Concrete Curb
ⓗ	Granite Curb
ⓙ	Slate Curb
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ⓜ	Slate Footway
ⓝ	Depressed Curb
ⓞ	Brick Gutter
ⓐ	Driveway
ⓑ	Stone Wall
ⓔ	Brick Wall
ⓕ	Concrete Wall
ⓖ	Sewer Return Elevation
ⓗ	Sewer Return Location

FINAL DESIGN ONE CALL

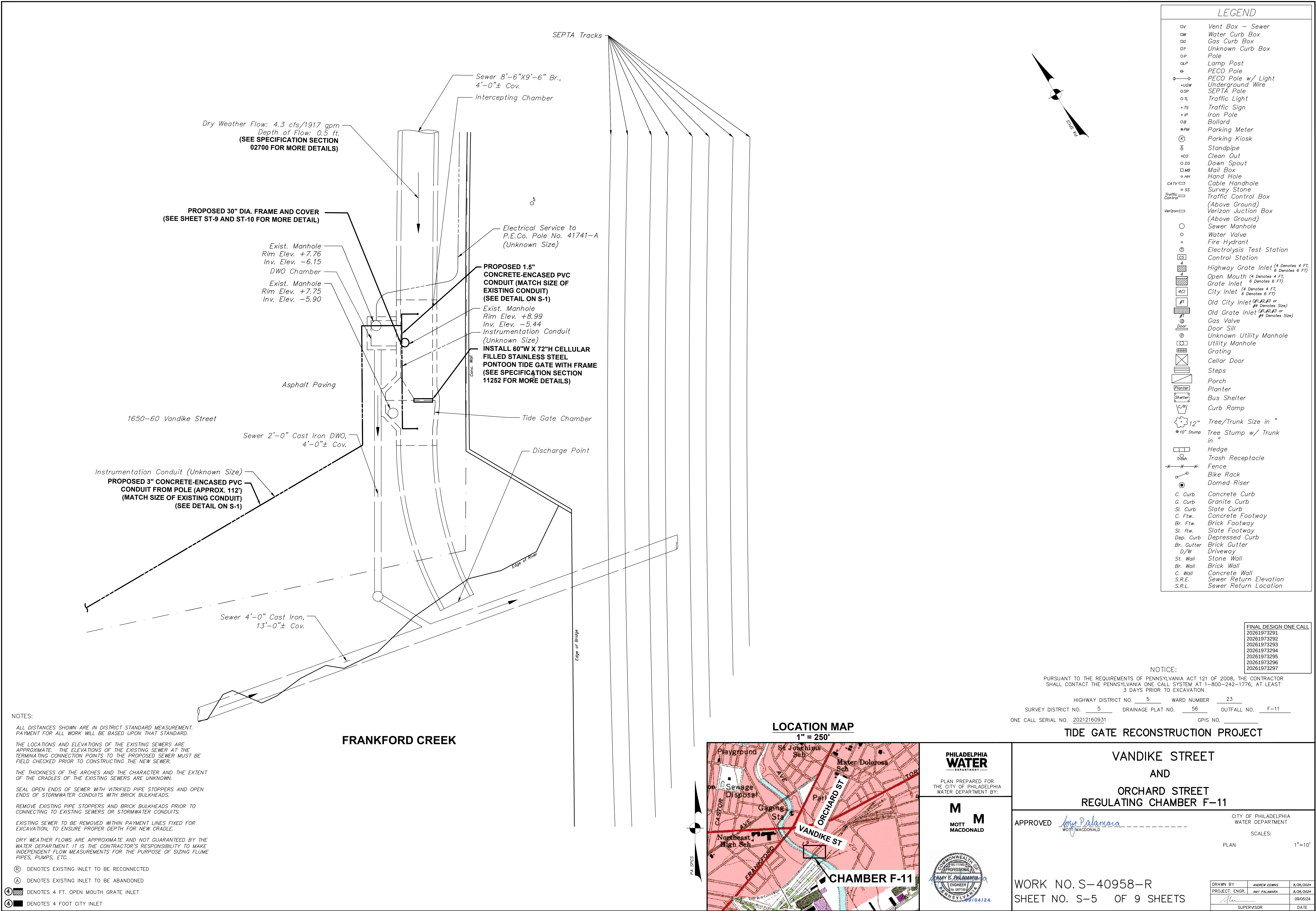
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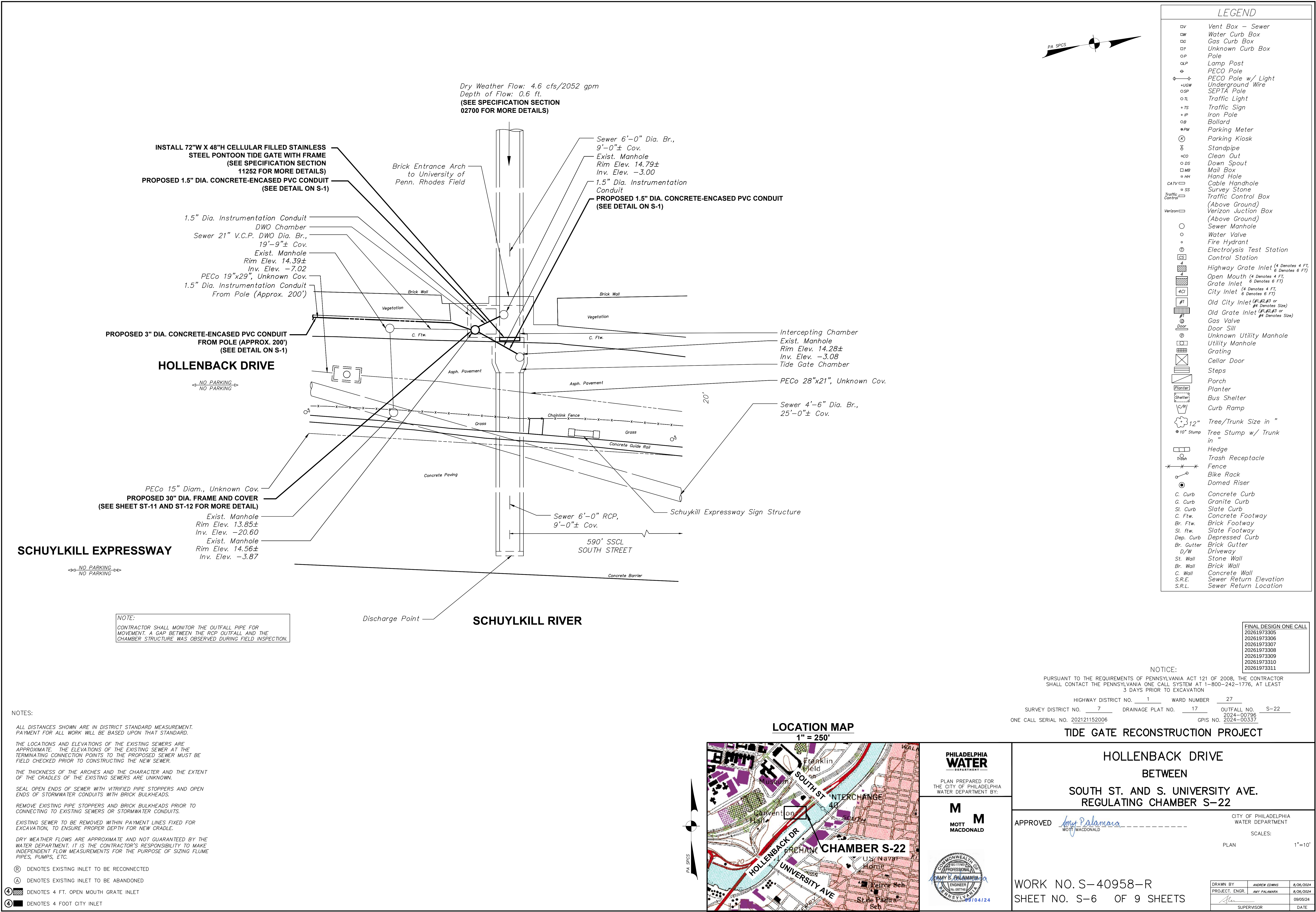
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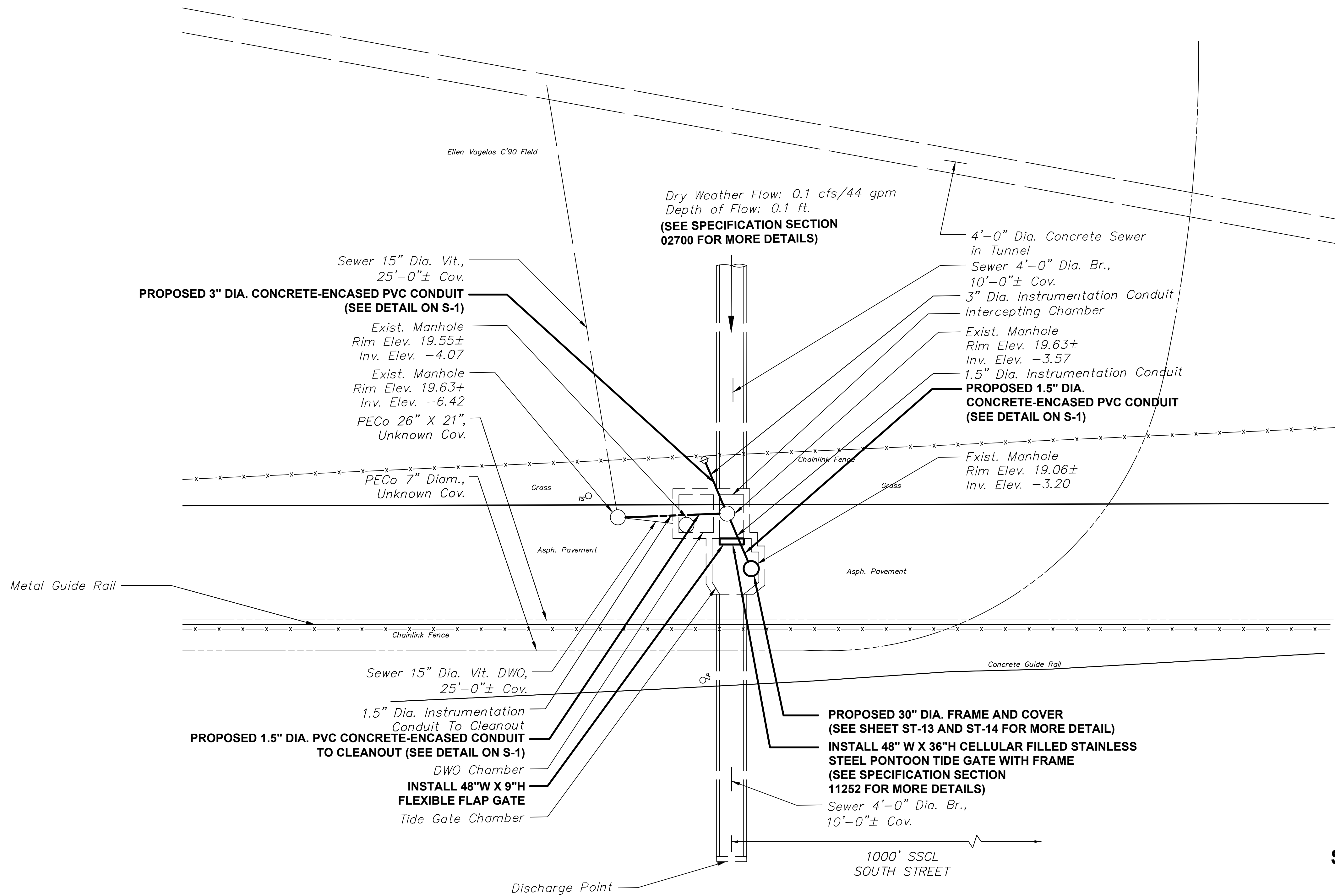
PURSUANT TO THE REQUIREMENTS OF PENNSYLVANIA ACT 121 OF 2008, THE CONTRACTOR SHALL CONTACT THE PENNSYLVANIA ONE CALL SYSTEM AT 1-800-242-1776, AT LEAST 3 DAYS PRIOR TO EXCAVATION

HIGHWAY DISTRICT NO. 2 WARD NUMBER 39
SURVEY DISTRICT NO. 2 DRAINAGE PLAT NO. 17 OUTFALL NO. D-70
ONE CALL SERIAL NO. 202121152006 GPIS NO. 2024-00774

TIDE GATE RECONSTRUCTION PROJECT







HOLLENBACK DRIVE

SCHUYLKILL EXPRESSWAY

SCHUYLKILL RIVER

LEGEND	
DV	Vent Box - Sewer
DW	Water Curb Box
DC	Gas Curb Box
DP	Unknown Curb Box
OP	Pole
OLP	Lamp Post
⊙	PECO Pole
⊙UGW	PECO Pole w/ Light
⊙SP	Underground Wire
⊙TL	SEPTA Pole
⊙TL	Traffic Light
⊙TS	Traffic Sign
⊙IP	Iron Pole
⊙B	Bollard
⊙PM	Parking Meter
⊙	Parking Kiosk
⊙	Standpipe
⊙CO	Clean Out
⊙DS	Down Spout
⊙MB	Mail Box
⊙HH	Hand Hole
CATV	Cable Handhole
⊙SS	Survey Stone
Traffic Control	Traffic Control Box
Verizon	(Above Ground) Verizon Junction Box
⊙	Sewer Manhole
⊙	Water Valve
⊙	Fire Hydrant
⊙	Electrolysis Test Station
⊙	Control Station
4	Highway Grate Inlet (4 Denotes 4 FT, 6 Denotes 6 FT)
4C	Open Mouth (4 Denotes 4 FT, 6 Denotes 6 FT)
4C	Grate Inlet (4 Denotes 4 FT, 6 Denotes 6 FT)
#1	City Inlet (4 Denotes 4 FT, 6 Denotes 6 FT)
#1	Old City Inlet (#1, #2, #3 or #4 Denotes Size)
#1	Old Grate Inlet (#1, #2, #3 or #4 Denotes Size)
⊙	Gas Valve
⊙	Door Sill
⊙	Unknown Utility Manhole
⊙	Utility Manhole
⊙	Grating
⊙	Cellar Door
⊙	Steps
⊙	Porch
⊙	Planter
⊙	Bus Shelter
⊙	Curb Ramp
⊙	Tree/Trunk Size in "
⊙	Tree Stump w/ Trunk in "
⊙	Hedge
⊙	Trash
⊙	Trash Receptacle
⊙	Fence
⊙	Bike Rack
⊙	Domed Riser
C. Curb	Concrete Curb
G. Curb	Granite Curb
Sl. Curb	Slate Curb
C. Ftw.	Concrete Footway
Br. Ftw.	Brick Footway
Sl. Ftw.	Slate Footway
Dep. Curb	Depressed Curb
Br. Gutter	Brick Gutter
D/W	Driveway
St. Wall	Stone Wall
Br. Wall	Brick Wall
C. Wall	Concrete Wall
S.R.E.	Sewer Return Elevation
S.R.L.	Sewer Return Location

NOTES:

ALL DISTANCES SHOWN ARE IN DISTRICT STANDARD MEASUREMENT. PAYMENT FOR ALL WORK WILL BE BASED UPON THAT STANDARD.

THE LOCATIONS AND ELEVATIONS OF THE EXISTING SEWERS ARE APPROXIMATE. THE ELEVATIONS OF THE EXISTING SEWER AT THE TERMINATING CONNECTION POINTS TO THE PROPOSED SEWER MUST BE FIELD CHECKED PRIOR TO CONSTRUCTING THE NEW SEWER.

THE THICKNESS OF THE ARCHES AND THE CHARACTER AND THE EXTENT OF THE CRADLES OF THE EXISTING SEWERS ARE UNKNOWN.

SEAL OPEN ENDS OF SEWER WITH VITRIFIED PIPE STOPPERS AND OPEN ENDS OF STORMWATER CONDUITS WITH BRICK BULKHEADS.

REMOVE EXISTING PIPE STOPPERS AND BRICK BULKHEADS PRIOR TO CONNECTING TO EXISTING SEWERS OR STORMWATER CONDUITS.

EXISTING SEWER TO BE REMOVED WITHIN PAYMENT LINES FIXED FOR EXCAVATION, TO ENSURE PROPER DEPTH FOR NEW CRADLE.

DRY WEATHER FLOWS ARE APPROXIMATE AND NOT GUARANTEED BY THE WATER DEPARTMENT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAKE INDEPENDENT FLOW MEASUREMENTS FOR THE PURPOSE OF SIZING FLUME PIPES, PUMPS, ETC.

⊙ DENOTES EXISTING INLET TO BE RECONNECTED

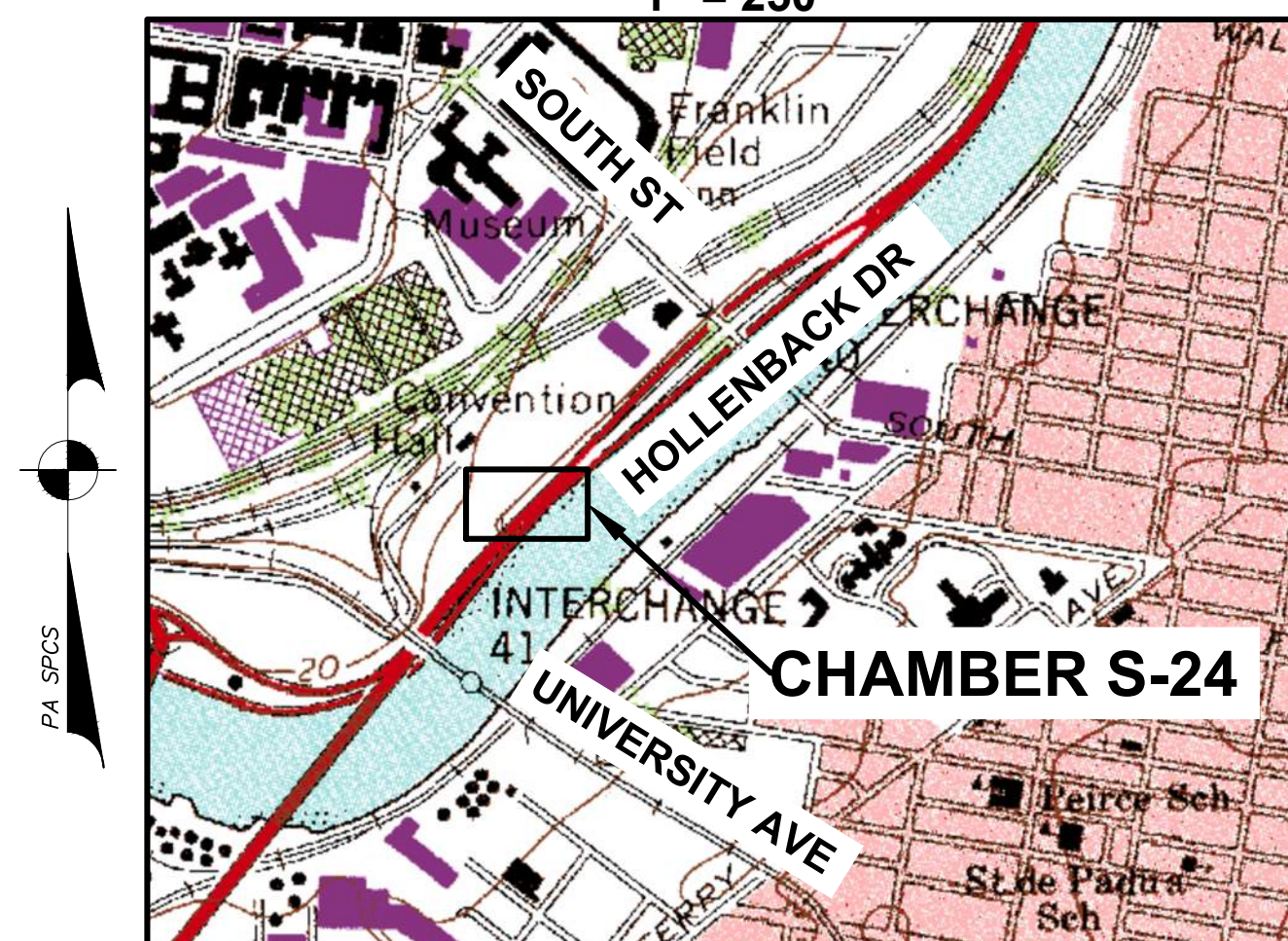
⊙ DENOTES EXISTING INLET TO BE ABANDONED

4 DENOTES 4 FT. OPEN MOUTH GRATE INLET

4 DENOTES 4 FOOT CITY INLET

LOCATION MAP

1" = 250'



PHILADELPHIA
WATER
DEPARTMENT

PLAN PREPARED FOR
THE CITY OF PHILADELPHIA
WATER DEPARTMENT BY:

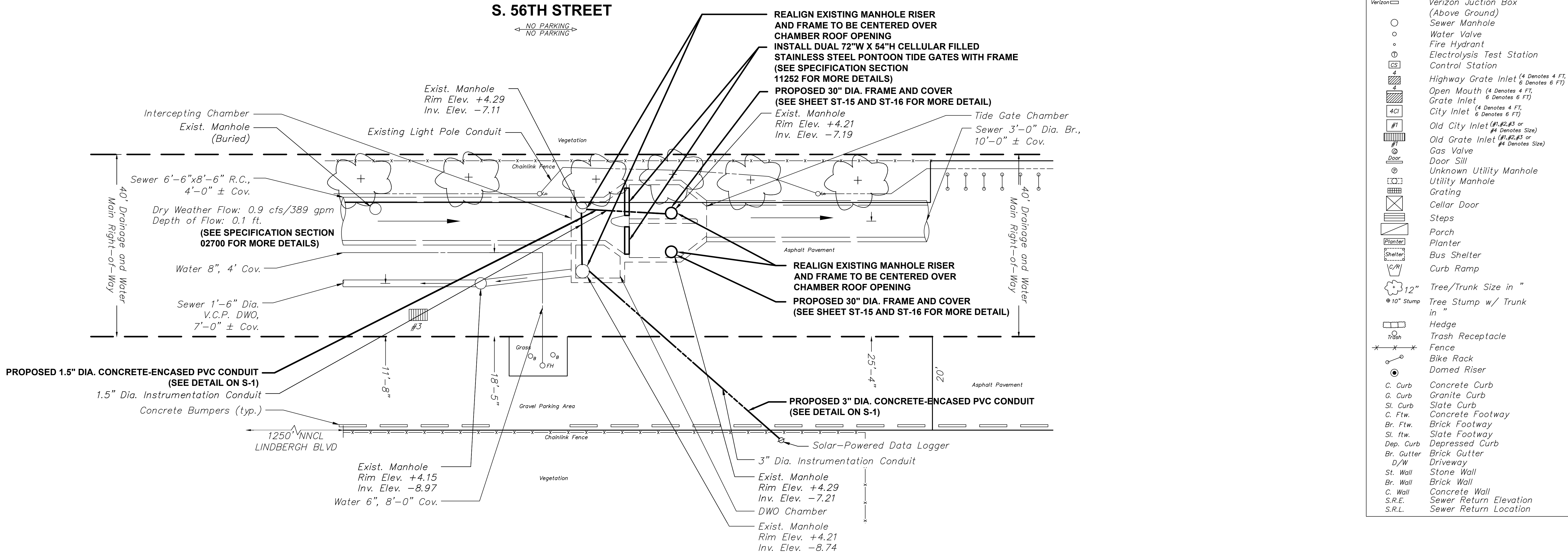
M
MOTT
MACDONALD



HOLLENBACK DRIVE BETWEEN SOUTH ST. AND S. UNIVERSITY AVE. REGULATING CHAMBER S-24	
APPROVED <i>Amy Palamara</i> MOTT MACDONALD	CITY OF PHILADELPHIA WATER DEPARTMENT
SCALES: PLAN 1"=10'	
WORK NO. S-40958-R SHEET NO. S-7 OF 9 SHEETS	
DRAWN BY: ANDREW EDWINS PROJECT ENGR. AMY PALAMARA SUPERVISOR	DATE: 8/26/2024 09/05/24

NOTES:

- ALL DISTANCES SHOWN ARE IN DISTRICT STANDARD MEASUREMENT. PAYMENT FOR ALL WORK WILL BE BASED UPON THAT STANDARD.
- THE LOCATIONS AND ELEVATIONS OF THE EXISTING SEWERS ARE APPROXIMATE. THE ELEVATIONS OF THE EXISTING SEWER AT THE TERMINATING CONNECTION POINTS TO THE PROPOSED SEWER MUST BE FIELD CHECKED PRIOR TO CONSTRUCTING THE NEW SEWER.
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- SEAL OPEN ENDS OF SEWER WITH VITRIFIED PIPE STOPPERS AND OPEN ENDS OF STORMWATER CONDUITS WITH BRICK BULKHEADS.
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- Ⓒ DENOTES EXISTING INLET TO BE RECONNECTED
- Ⓐ DENOTES EXISTING INLET TO BE ABANDONED
- ④  DENOTES 4 FT. OPEN MOUTH GRATE INLET
- ④  DENOTES 4 FOOT CITY INLET



NOTICE:

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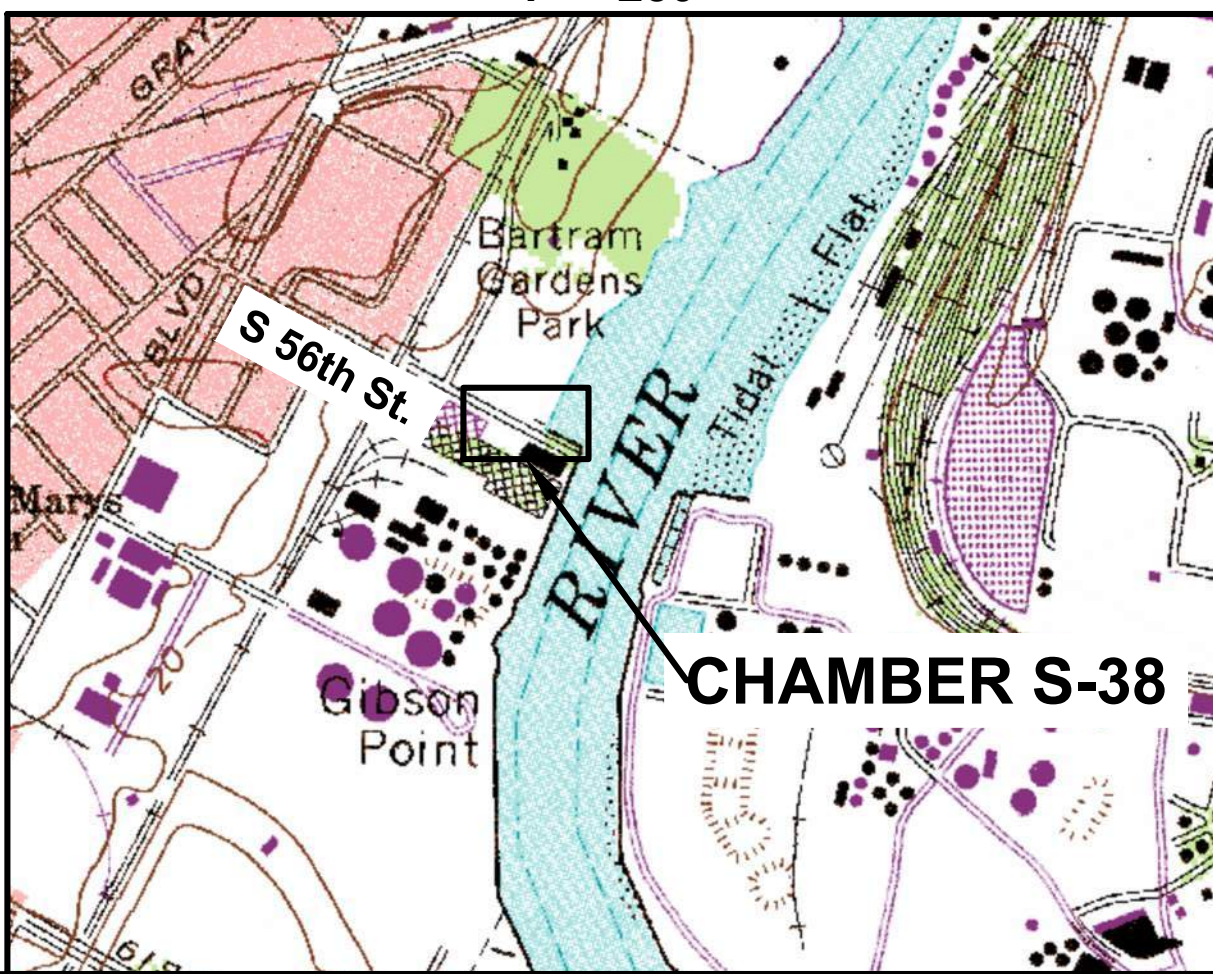
HIGHWAY DISTRICT NO. 1 WARD NUMBER 40

SURVEY DISTRICT NO. 7 DRAINAGE PLAT NO. 17 OUTFALL NO. S-38

ONE CALL SERIAL NO. 202121152006 GPIS NO.

LOCATION MAP

1" = 250'



PHILADELPHIA WATER DEPARTMENT

PLAN PREPARED FOR THE CITY OF PHILADELPHIA WATER DEPARTMENT BY:

M M

MOTT MACDONALD

AMY S. PALAMARA

PROFESSIONAL ENGINEER

NO. 007167

PA 04/24

SOUTH 56TH STREET

BETWEEN

EASTWICK AVE. AND THE DELAWARE RIVER

REGULATING CHAMBER S-38

APPROVED 

CITY OF PHILADELPHIA WATER DEPARTMENT

SCALES:

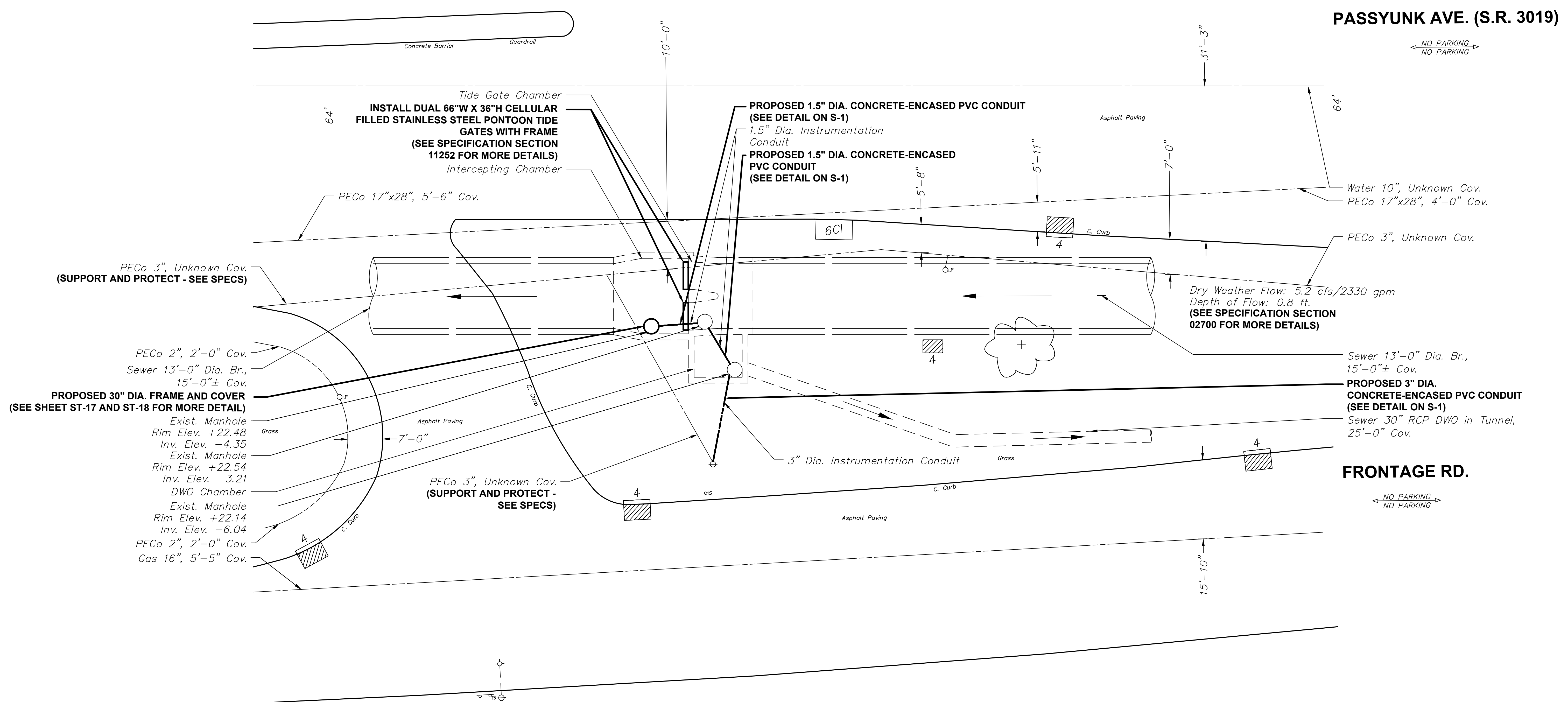
PLAN 1"=10'

WORK NO. S-40958-R

SHEET NO. S-8 OF 9 SHEETS

DRAWN BY	ANDREW EDWINS	8/26/2024
PROJECT ENGR.	AMY PALAMARA	8/26/2024
SUPERVISOR		09/05/24
DATE		

LEGEND	
DV	Vent Box - Sewer
DW	Water Curb Box
DG	Gas Curb Box
DP	Unknown Curb Box
OP	Pole
OLP	Lamp Post
⊙	PECO Pole
⊙+UGW	PECO Pole w/ Light
⊙SP	Underground Wire
⊙TL	SEPTA Pole
⊙	Traffic Light
⊙TS	Traffic Sign
⊙IP	Iron Pole
⊙B	Bollard
⊙PM	Parking Meter
⊙	Parking Kiosk
⊙	Standpipe
⊙CO	Clean Out
⊙DS	Down Spout
⊙MB	Mail Box
⊙HH	Hand Hole
CATV	Cable Handhole
⊙SS	Survey Stone
Traffic Control	Traffic Control Box
Verizon	Verizon Junction Box
⊙	(Above Ground)
⊙	Sewer Manhole
⊙	Water Valve
⊙	Fire Hydrant
⊙	Electrolysis Test Station
⊙	Control Station
⊙	Highway Grate Inlet (4 Denotes 4 FT, 6 Denotes 6 FT)
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⊙	Grate Inlet (4 Denotes 4 FT, 6 Denotes 6 FT)
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⊙	Old City Inlet (#1, #2, #3 or #4 Denotes Size)
⊙	Old Grate Inlet (#1, #2, #3 or #4 Denotes Size)
⊙	Gas Valve
⊙	Door Sill
⊙	Unknown Utility Manhole
⊙	Utility Manhole
⊙	Grating
⊙	Cellar Door
⊙	Steps
⊙	Porch
⊙	Planter
⊙	Bus Shelter
⊙	Curb Ramp
⊙	Tree/Trunk Size in "
⊙	Tree Stump w/ Trunk in "
⊙	Hedge
⊙	Trash Receptacle
⊙	Fence
⊙	Bike Rack
⊙	Domed Riser
C. Curb	Concrete Curb
G. Curb	Granite Curb
Sl. Curb	Slate Curb
C. Ftw.	Concrete Footway
Br. Ftw.	Brick Footway
Sl. Ftw.	Slate Footway
Dep. Curb	Depressed Curb
Br. Gutter	Brick Gutter
D/W	Driveway
St. Wall	Stone Wall
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C. Wall	Concrete Wall
S.R.E.	Sewer Return Elevation
S.R.L.	Sewer Return Location



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Ⓡ DENOTES EXISTING INLET TO BE RECONNECTED

ⓐ DENOTES EXISTING INLET TO BE ABANDONED

④ DENOTES 4 FT. OPEN MOUTH GRATE INLET

④ DENOTES 4 FOOT CITY INLET

LOCATION MAP

1" = 250'

PHILADELPHIA WATER DEPARTMENT

PLAN PREPARED FOR THE CITY OF PHILADELPHIA WATER DEPARTMENT BY:

M MOTT MACDONALD

AMY S. PALAMARA

09/04/24

TIDE GATE RECONSTRUCTION PROJECT

PASSYUNK AVENUE (S.R. 3019)

AND

DOVER STREET REGULATING CHAMBER S-42

APPROVED *Amy Palamara*

CITY OF PHILADELPHIA WATER DEPARTMENT

SCALES:

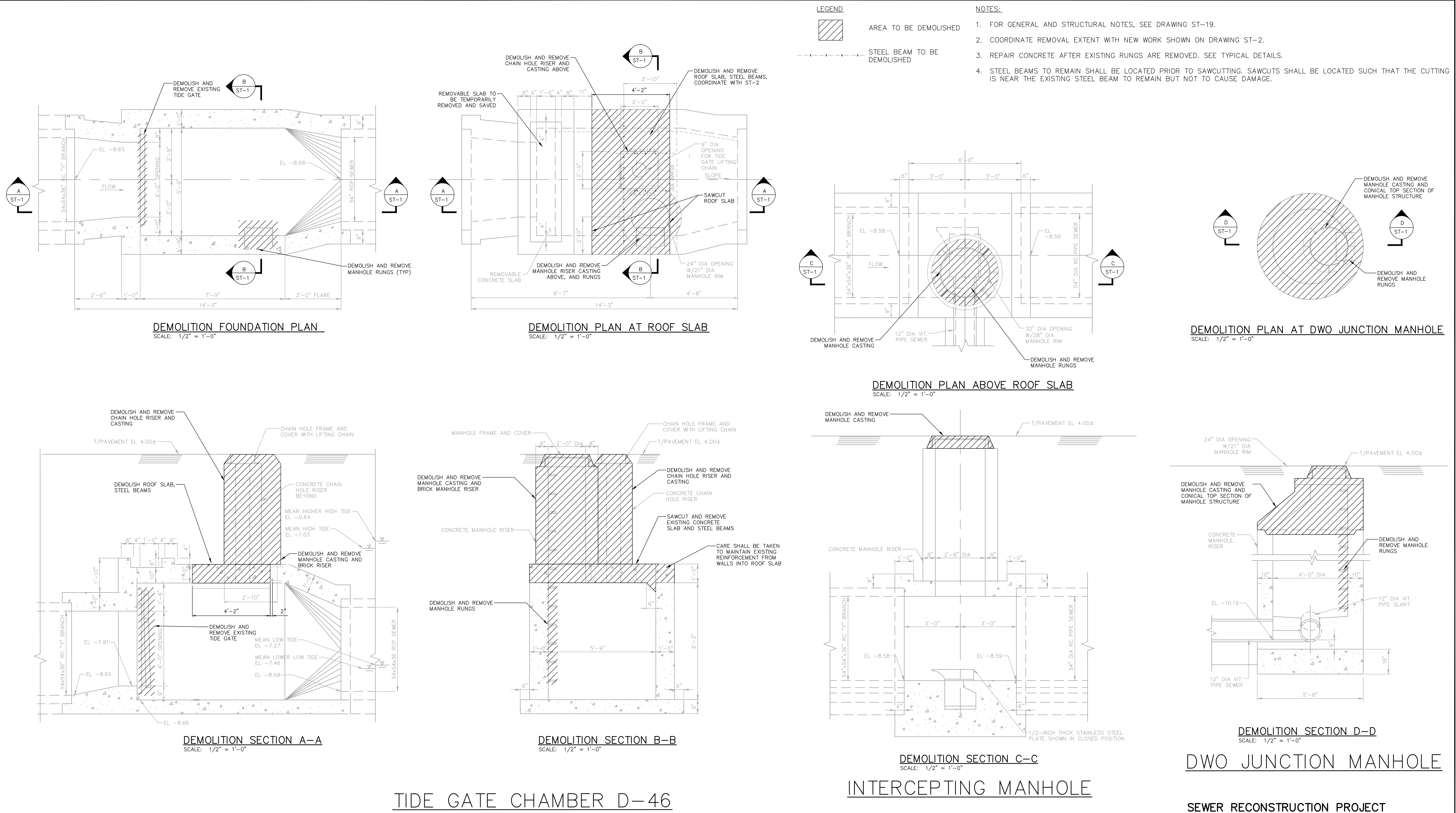
PLAN 1"=10'

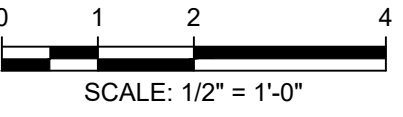
WORK NO. S-40958-R

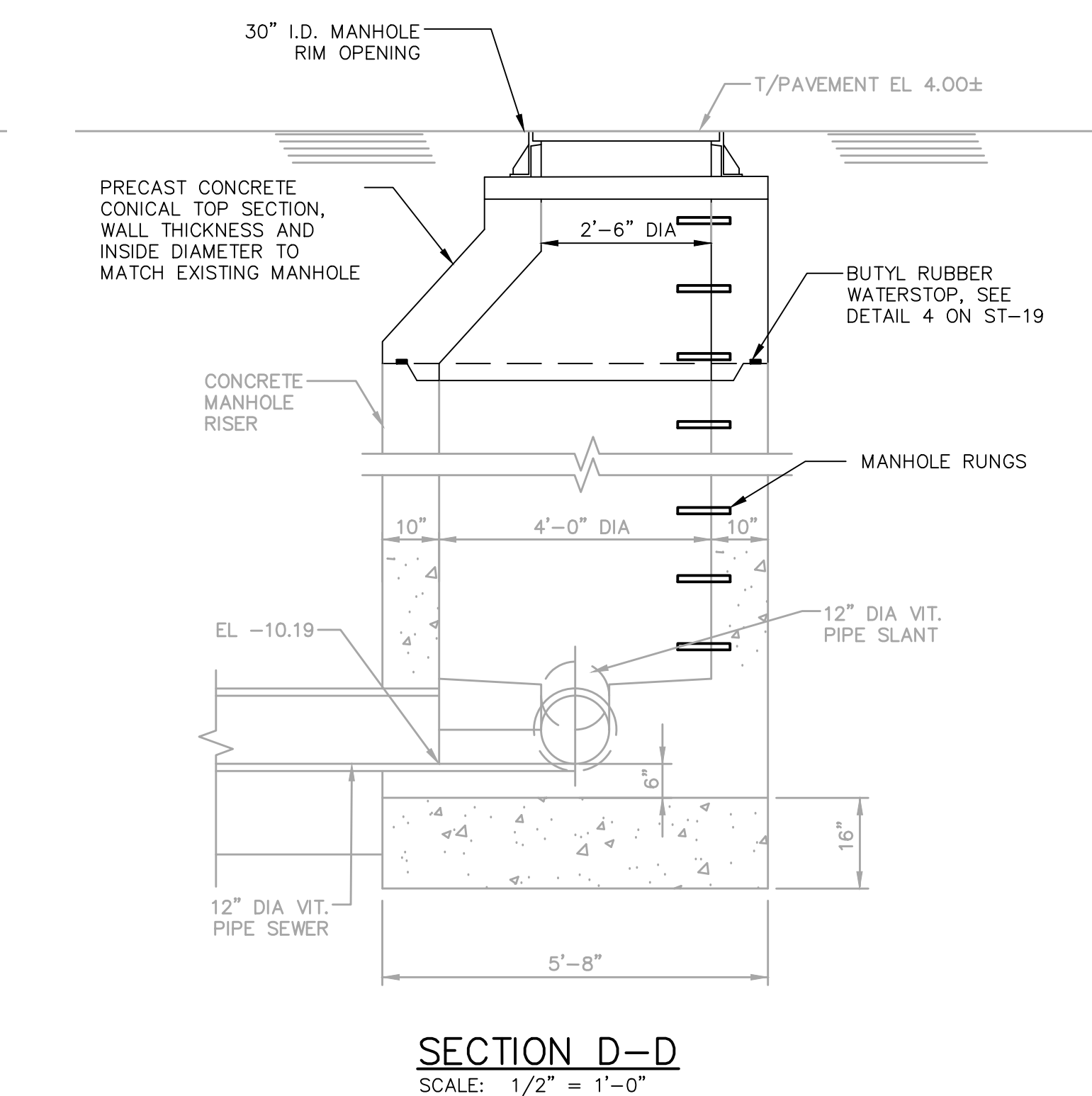
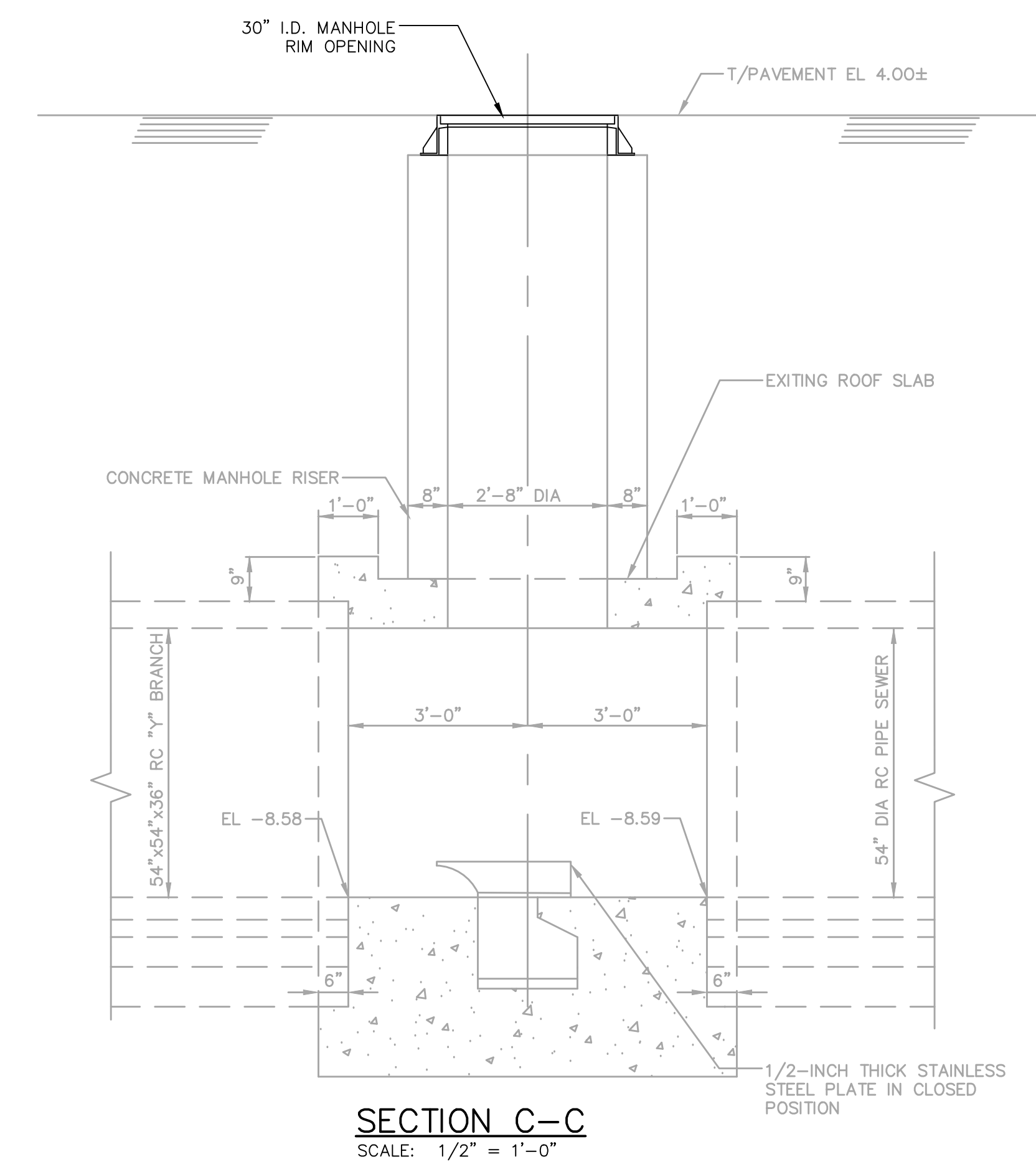
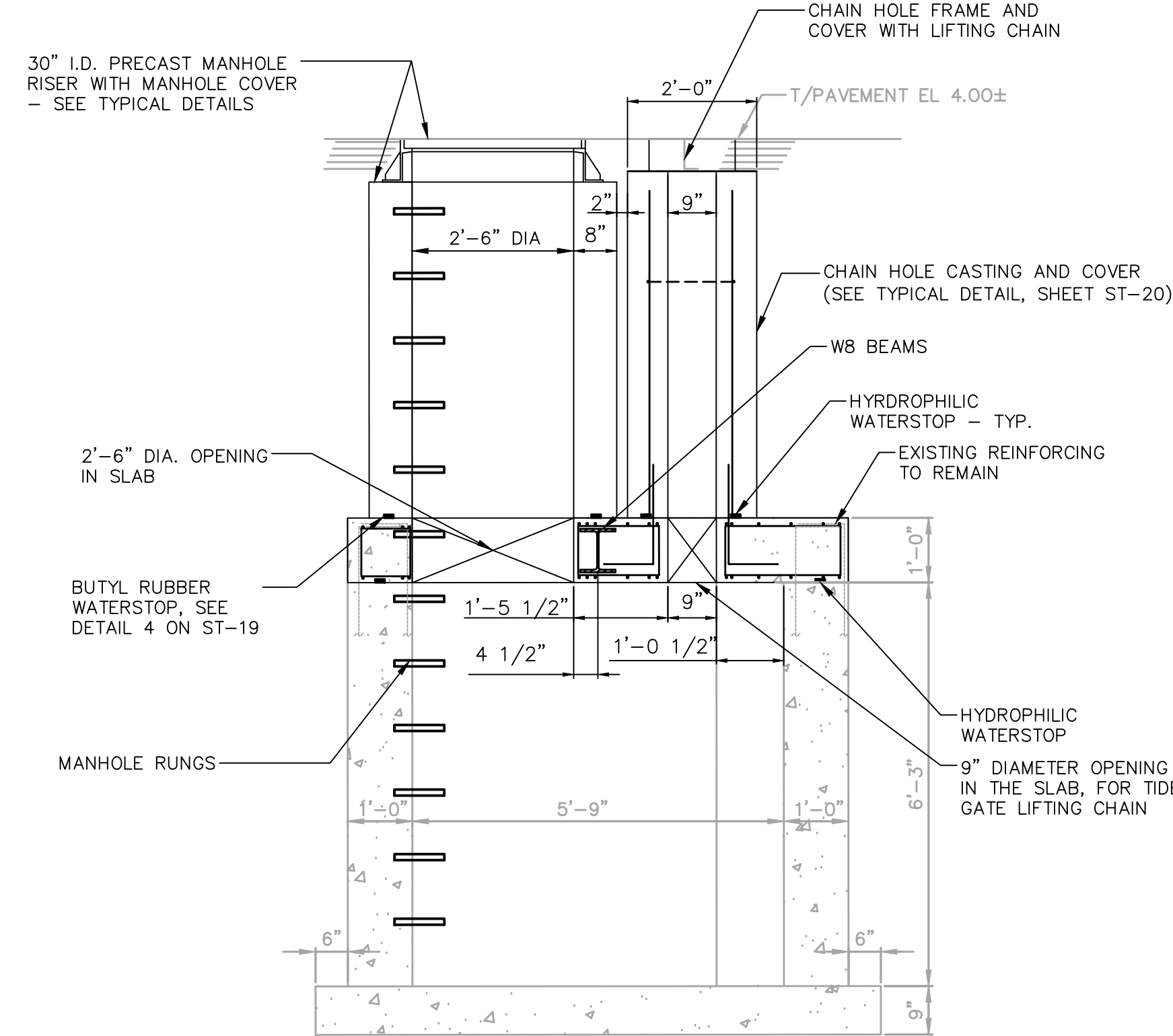
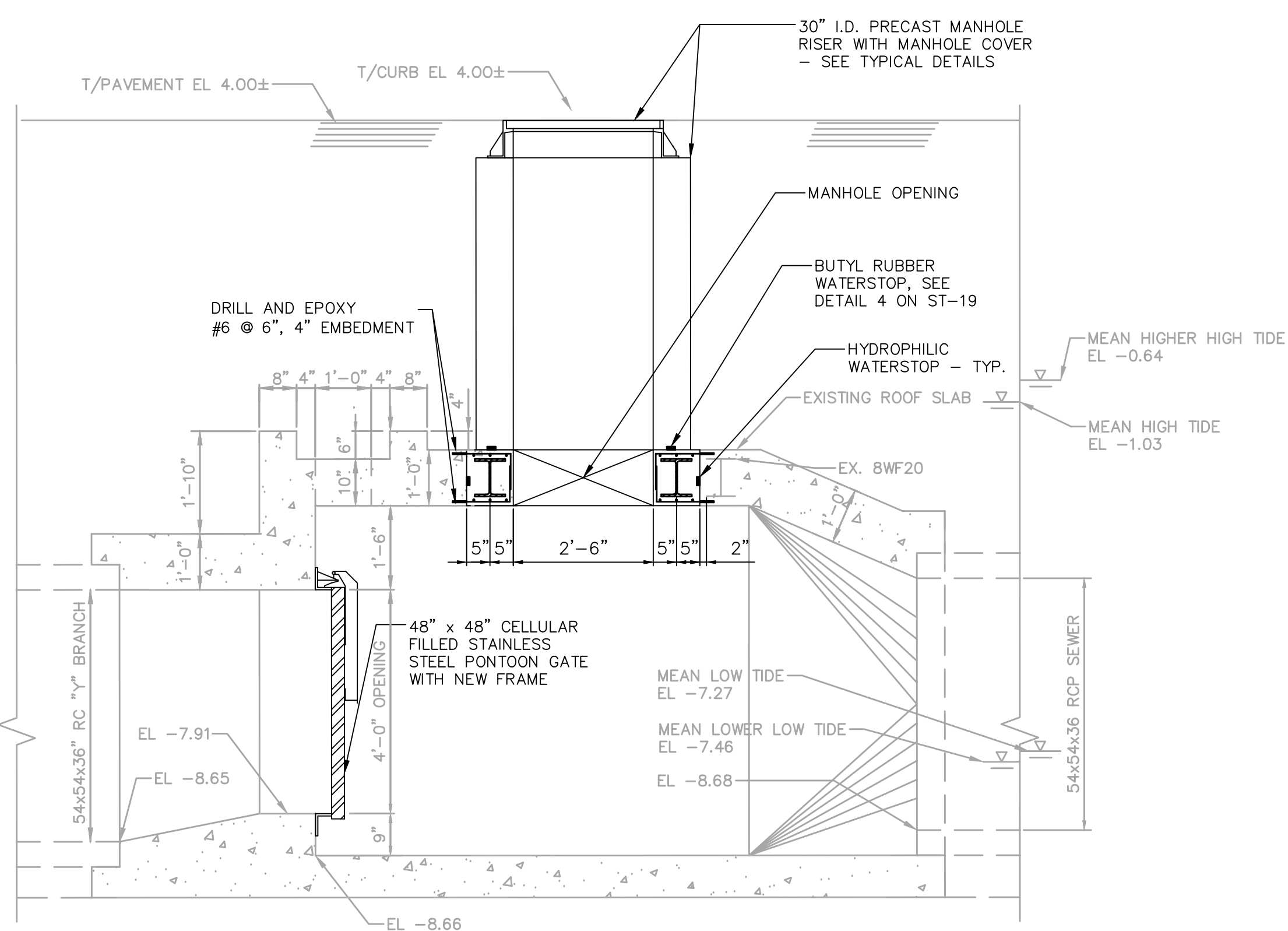
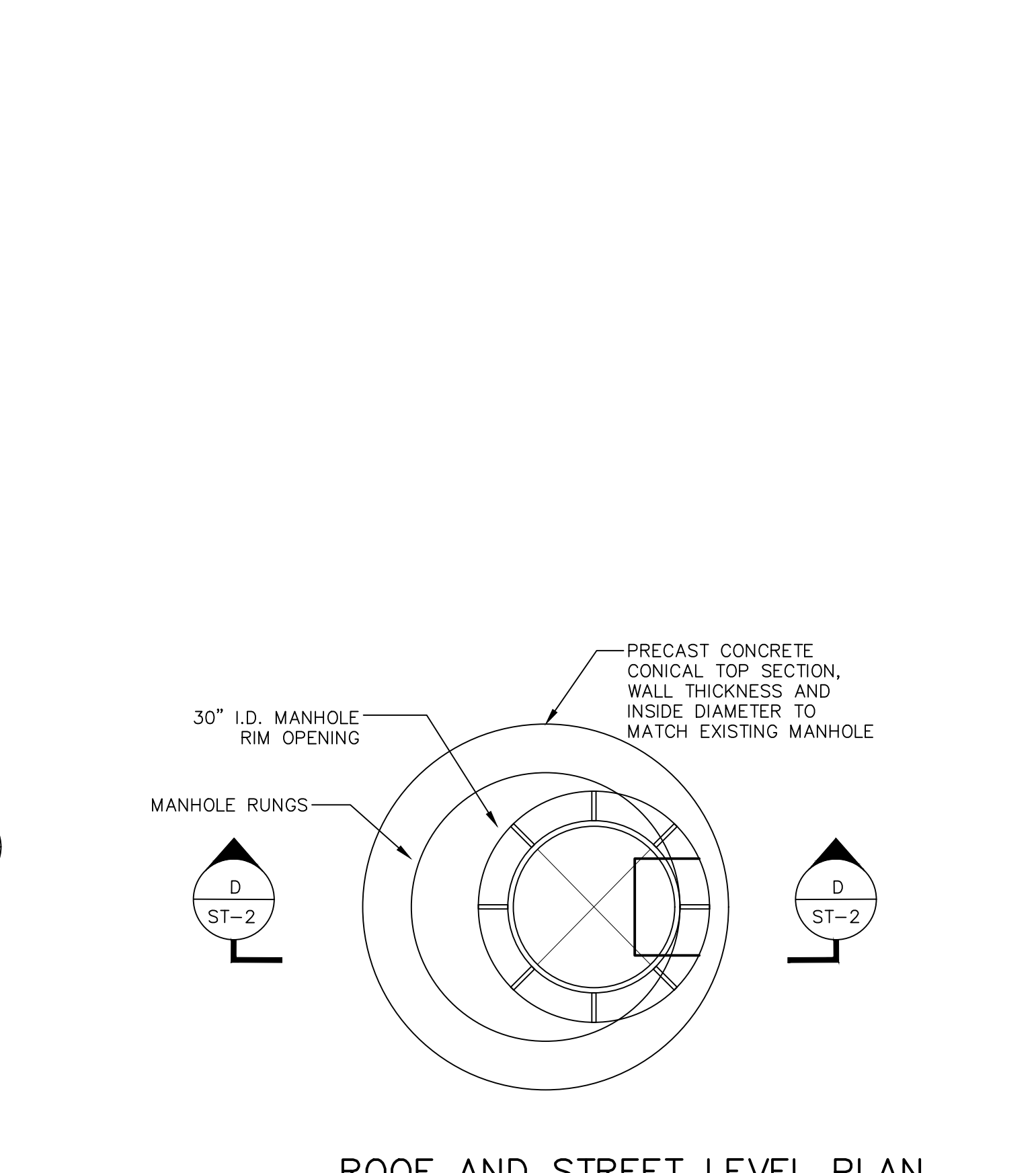
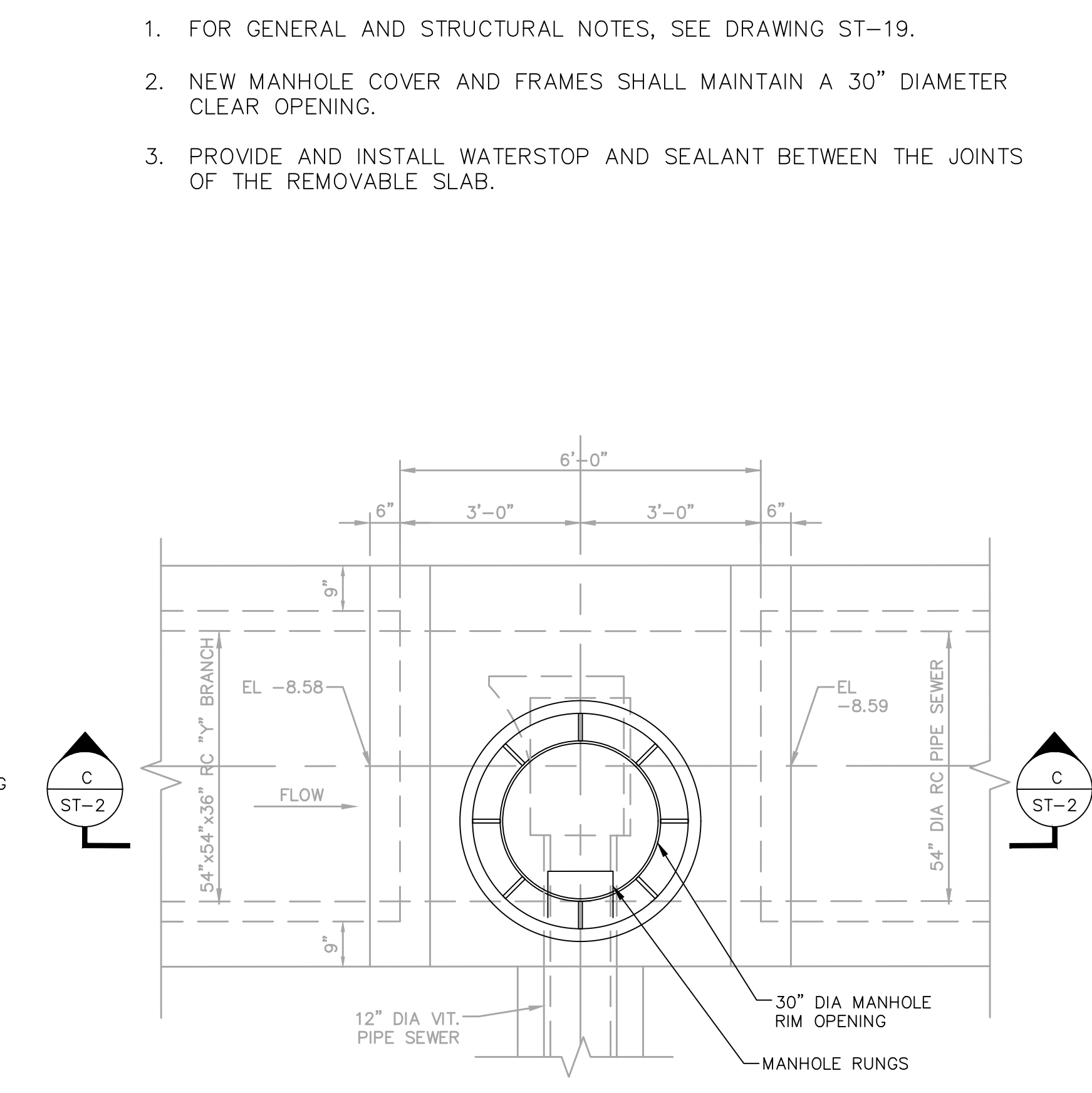
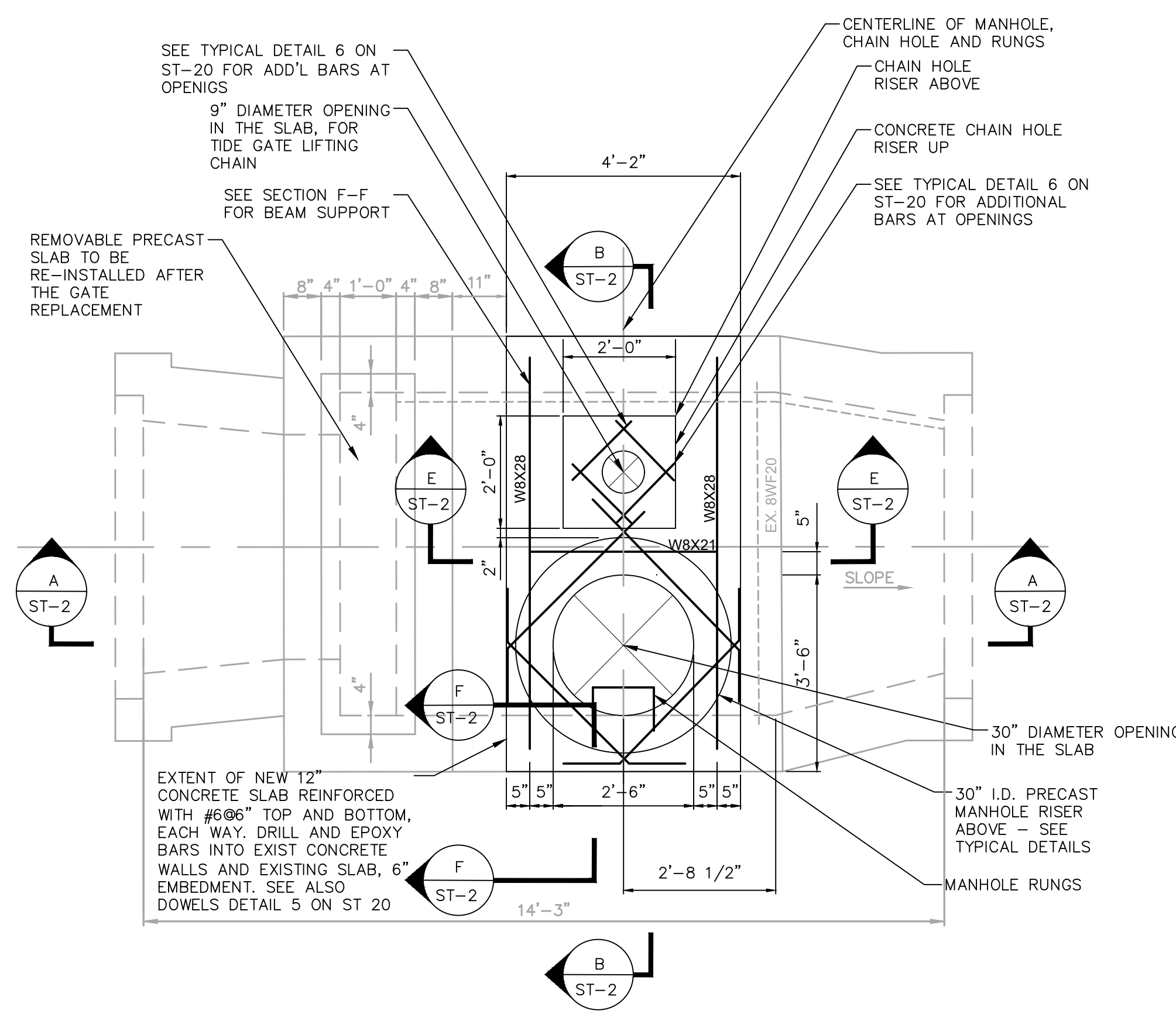
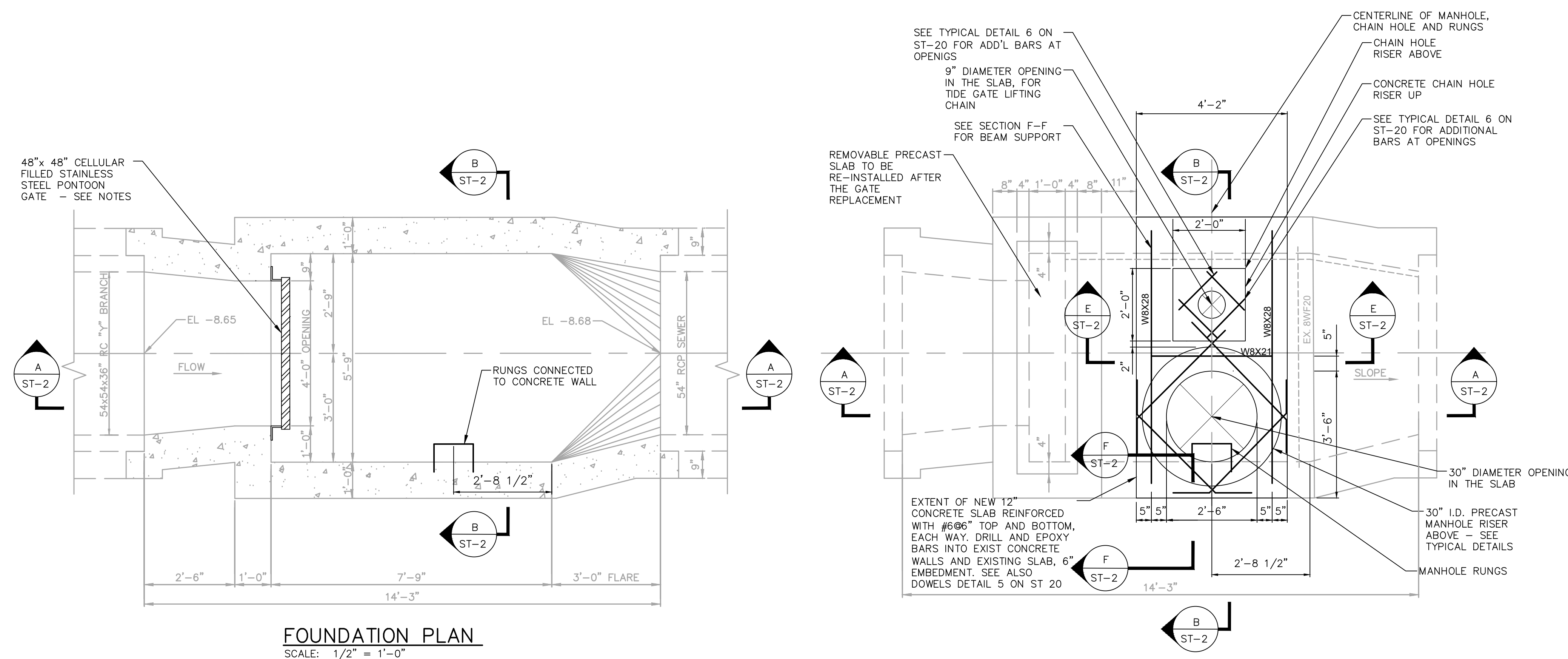
SHEET NO. S-9 OF 9 SHEETS

DRAWN BY	ANDREW EDWINS	8/26/2024
PROJECT ENGR.	AMY PALAMARA	8/26/2024
SUPERVISOR		09/05/24
DATE		

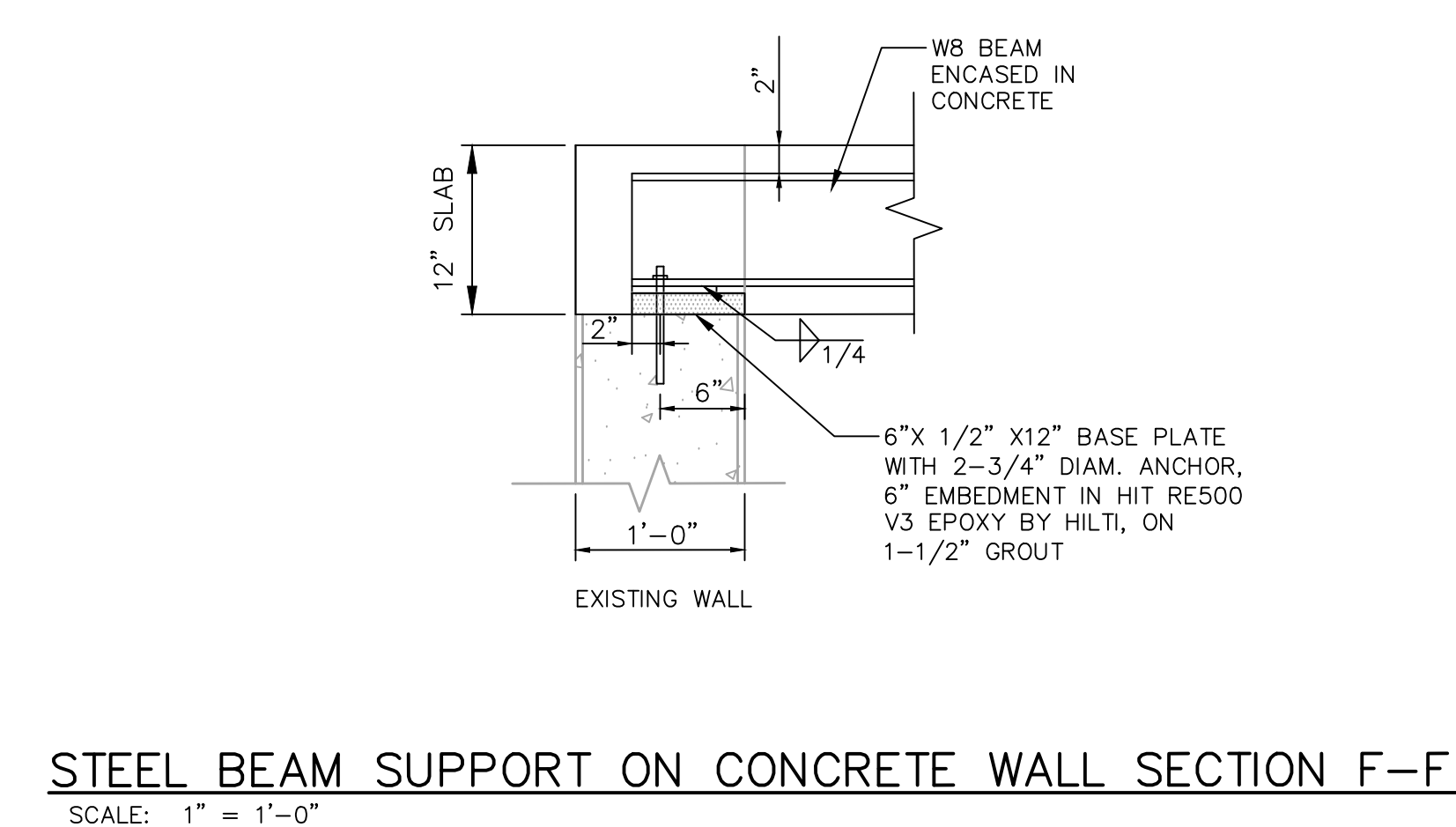
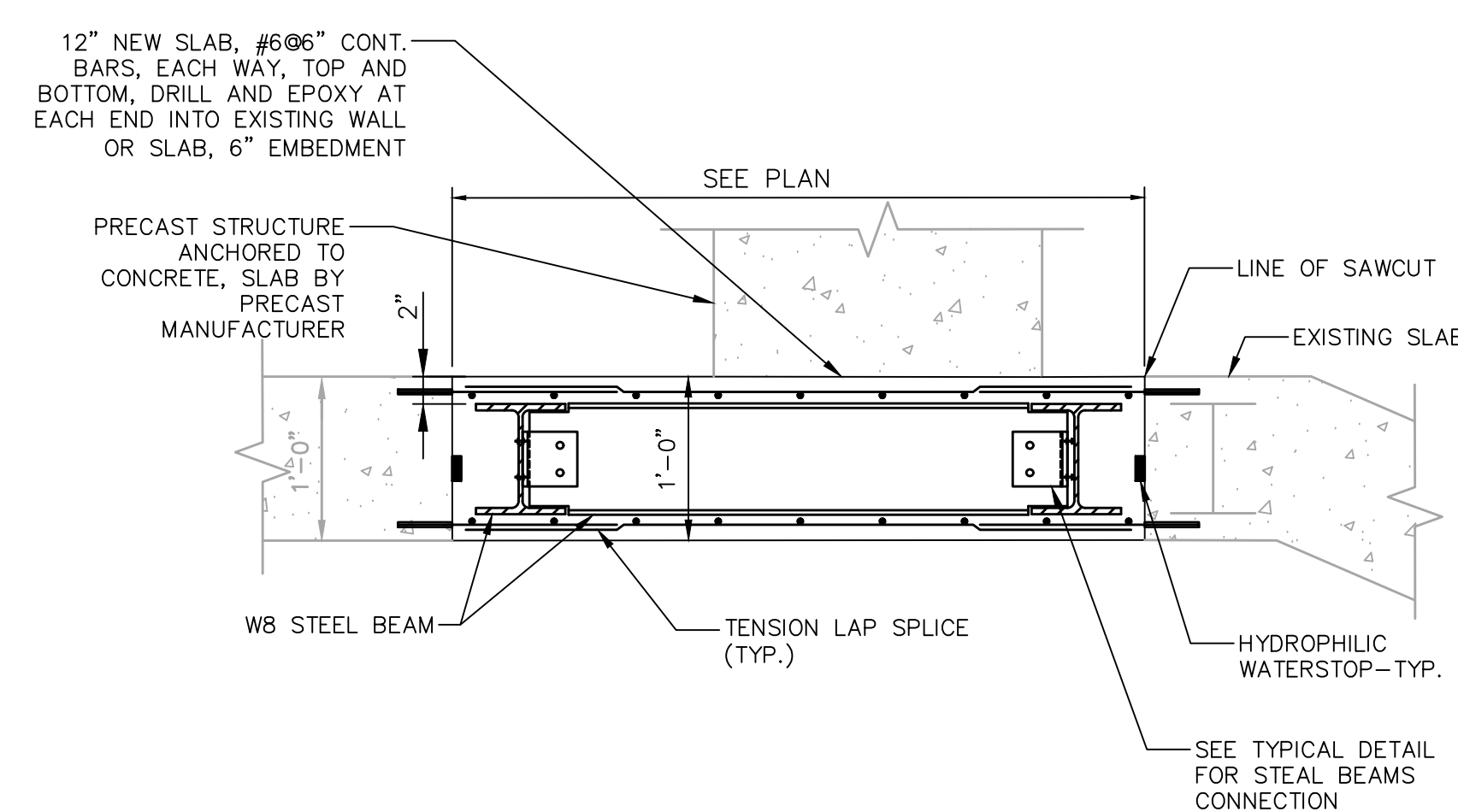
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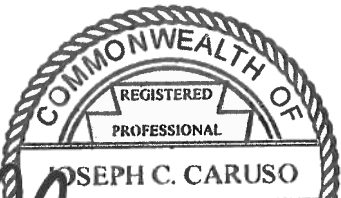
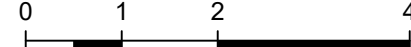
 PHILADELPHIA WATER DEPARTMENT PLAN PREPARED FOR THE CITY OF PHILADELPHIA WATER DEPARTMENT BY:	NORTHERN LIBERTIES FLOOD RELIEF PROGRAM PHASE VI										
	STRUCTURAL DELAWARE AVENUE AND PENN STREET CHAMBER D-46 DEMOLITION PLANS AND SECTIONS										
 MOTT MACDONALD  JOSEPH C. CARUSO REGISTERED PROFESSIONAL ENGINEER PENNSYLVANIA 09/04/2024	APPROVED  MATT MACDONALD	CITY OF PHILADELPHIA WATER DEPARTMENT SCALES: SECTIONS 1/2" = 1'-0"  SCALE: 1/2" = 1'-0"									
	WORK NO. S-40958-RD SHEET NO. ST-1 OF 20 SHEETS										
	<table><tr><td>DRAWN BY</td><td>C. THOMPSON</td><td>08/26/24</td></tr><tr><td>PROJECT ENGR.</td><td>J. CARUSO</td><td>08/26/24</td></tr><tr><td>SUPERVISOR</td><td></td><td>DATE</td></tr></table>	DRAWN BY	C. THOMPSON	08/26/24	PROJECT ENGR.	J. CARUSO	08/26/24	SUPERVISOR		DATE	
DRAWN BY	C. THOMPSON	08/26/24									
PROJECT ENGR.	J. CARUSO	08/26/24									
SUPERVISOR		DATE									

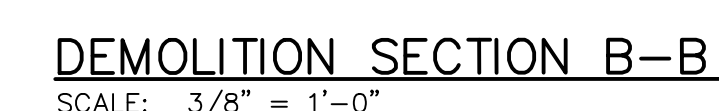
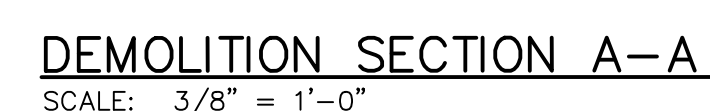
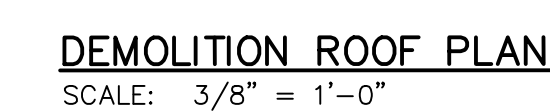
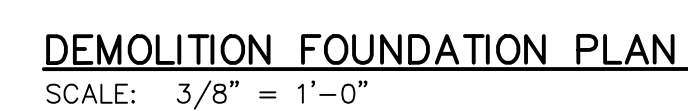


TIDE GATE CHAMBER D-46



- NOTES:
1. FOR GENERAL AND STRUCTURAL NOTES, SEE DRAWING ST-19.
 2. NEW MANHOLE COVER AND FRAMES SHALL MAINTAIN A 30" DIAMETER CLEAR OPENING.
 3. PROVIDE AND INSTALL WATERSTOP AND SEALANT BETWEEN THE JOINTS OF THE REMOVABLE SLAB.

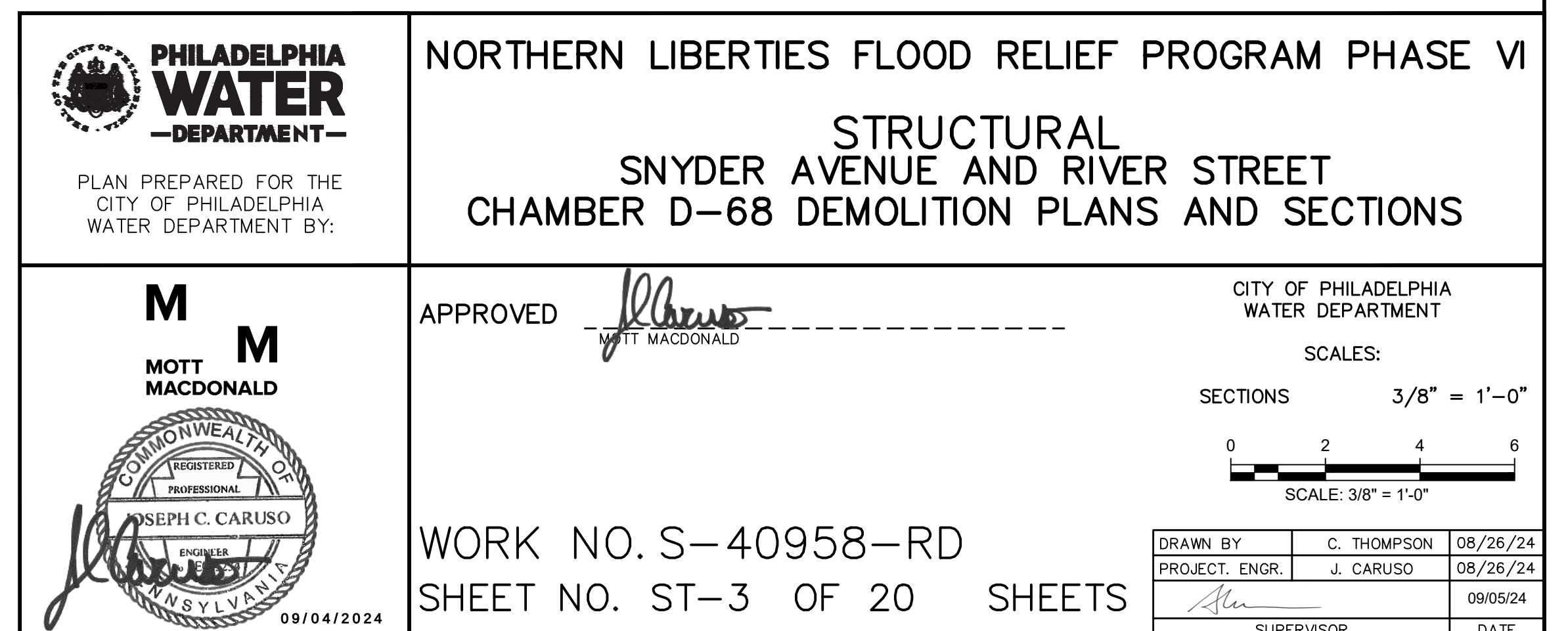
 PHILADELPHIA WATER —DEPARTMENT— PLAN PREPARED FOR THE CITY OF PHILADELPHIA WATER DEPARTMENT BY:	NORTHERN LIBERTIES FLOOD RELIEF PROGRAM PHASE VI STRUCTURAL DELAWARE AVENUE AND PENN STREET CHAMBER D-46 REPAIR PLANS AND SECTIONS
M M MOTT MACDONALD  JOSEPH C. CARUSO ENGINEER STATE OF PENNSYLVANIA 09/04/2024	APPROVED _____ <i>[Signature]</i> JOHN MACDONALD CITY OF PHILADELPHIA WATER DEPARTMENT SCALES: SECTIONS 1/2" = 1'-0"  SCALE: 1/2" = 1'-0"
WORK NO. S-40958-RD SHEET NO. ST-2 OF 20 SHEETS	

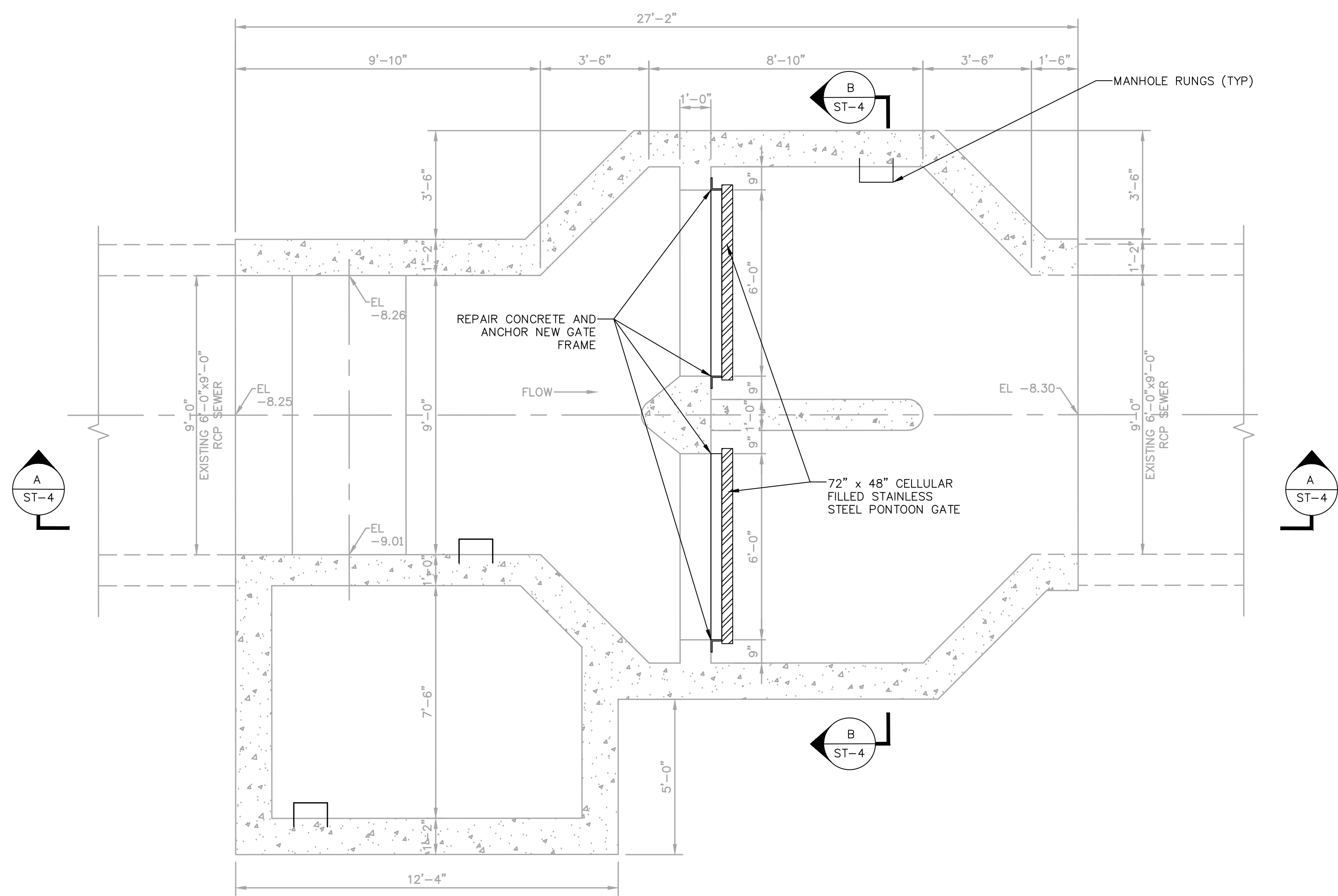


- NOTES:
1. FOR GENERAL AND STRUCTURAL NOTES, SEE DRAWING ST-19.
 2. DEMOLITION OF ROOF SLAB SHALL BE PERFORMED SUCH THAT WALL REINFORCING EXTENDING INTO THE ROOF SLAB IS PRESERVED.
 3. STEEL BEAMS TO REMAIN SHALL BE LOCATED PRIOR TO SAWCUTTING. SAWCUTS SHALL BE LOCATED SUCH THAT THE CUTTING IS NEAR THE EXISTING STEEL BEAM TO REMAIN BUT NOT TO CAUSE DAMAGE.

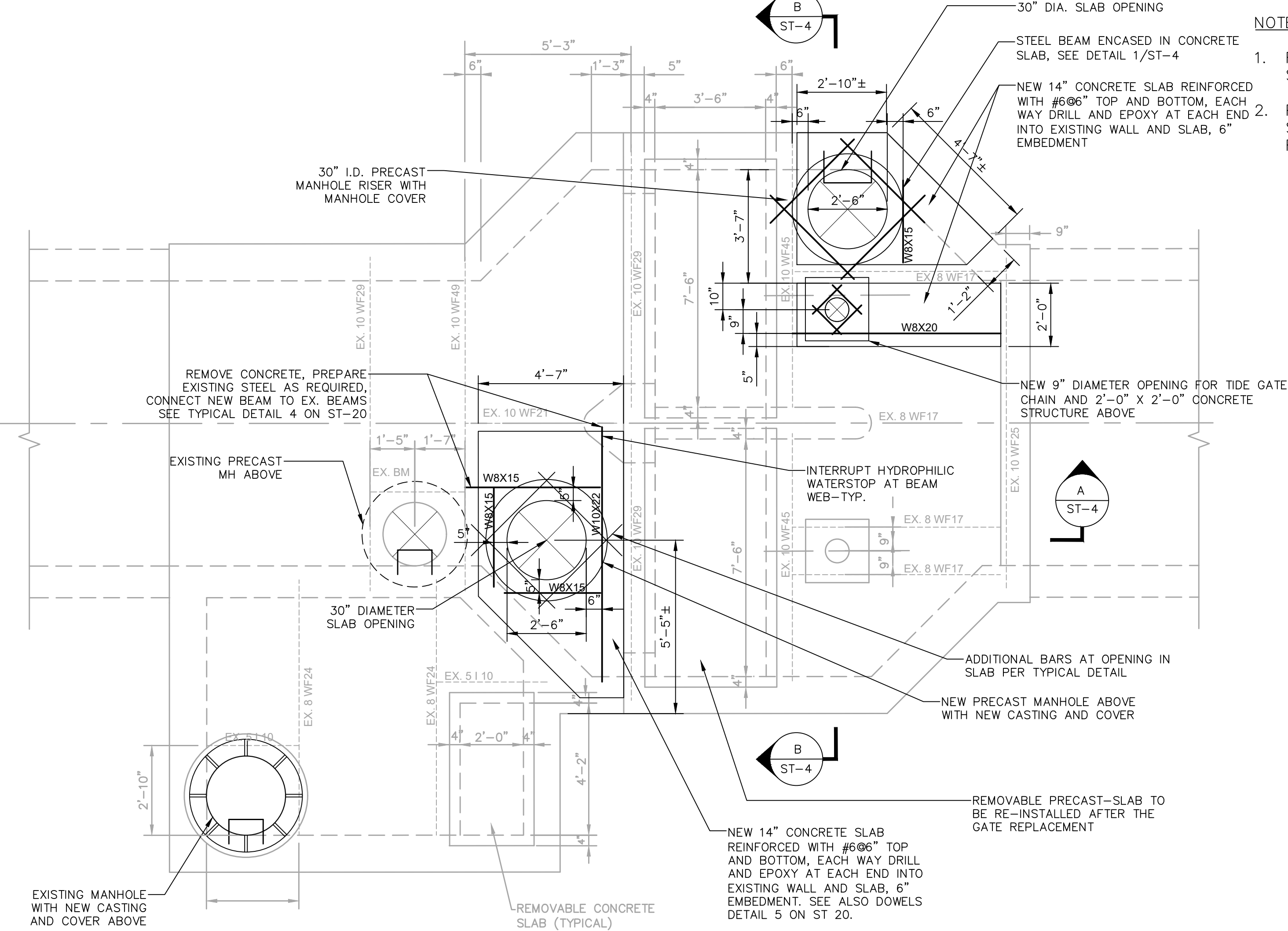
LEGEND

	AREA TO BE DEMOLISHED
	STEEL BEAM TO BE DEMOLISHED

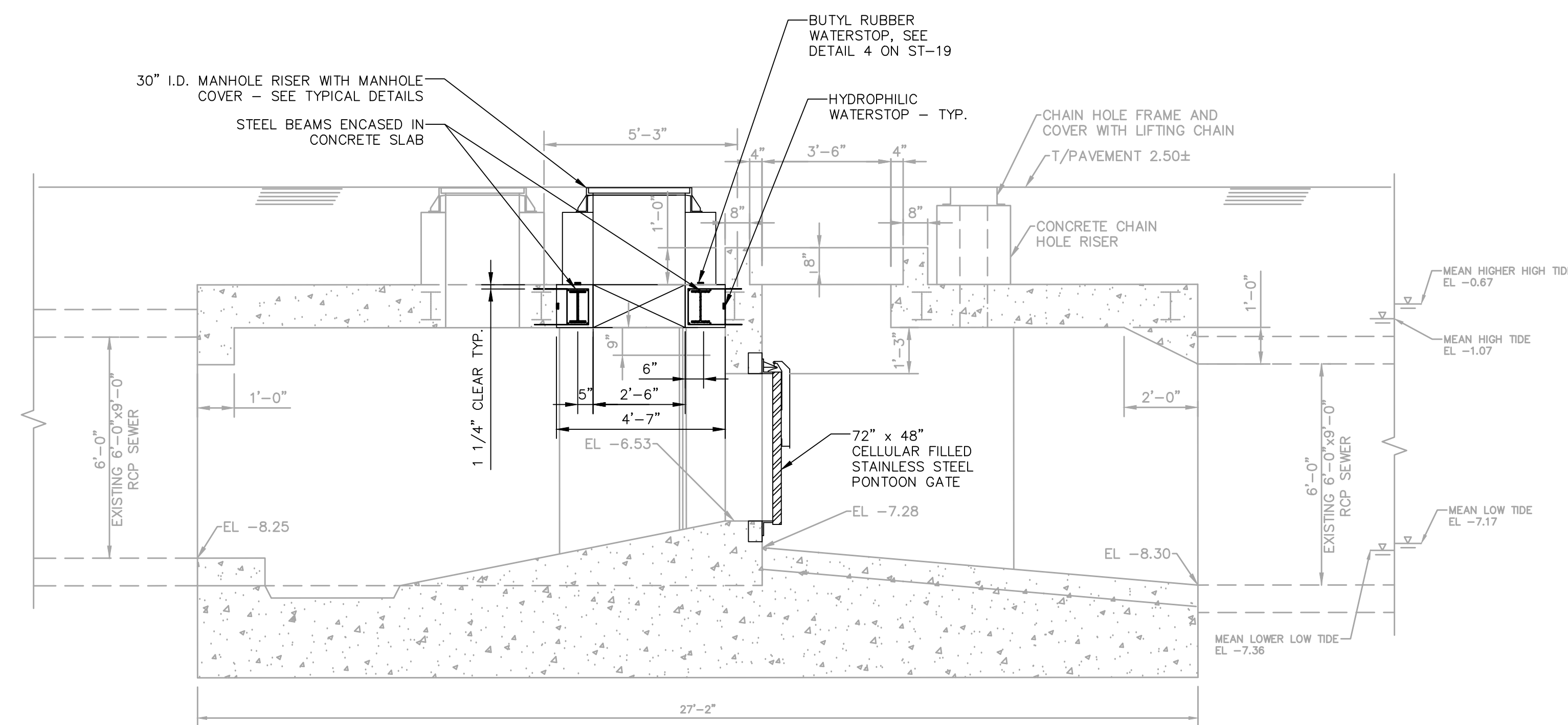




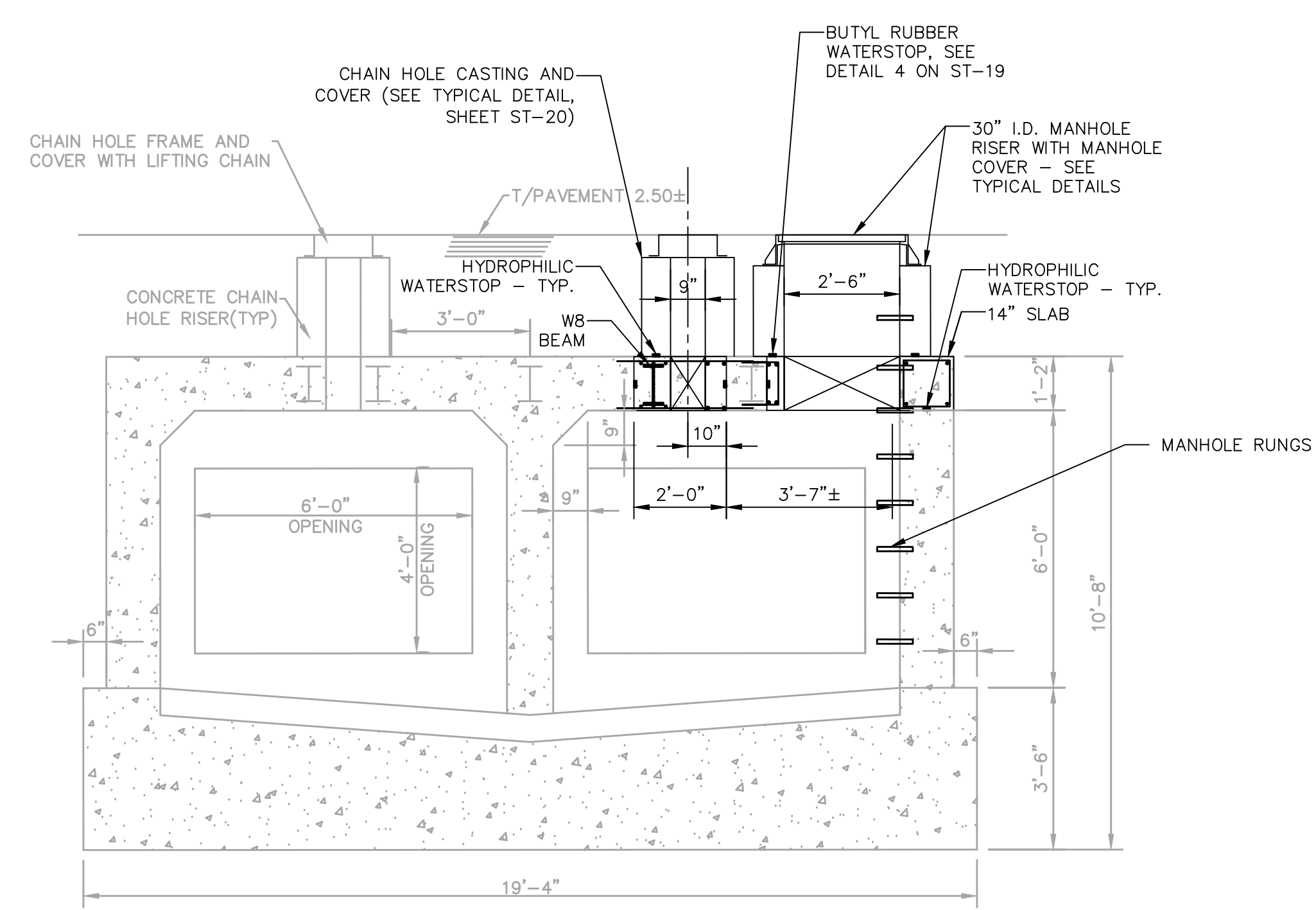
REPAIR FOUNDATION PLAN
SCALE: 3/8" = 1'-0"



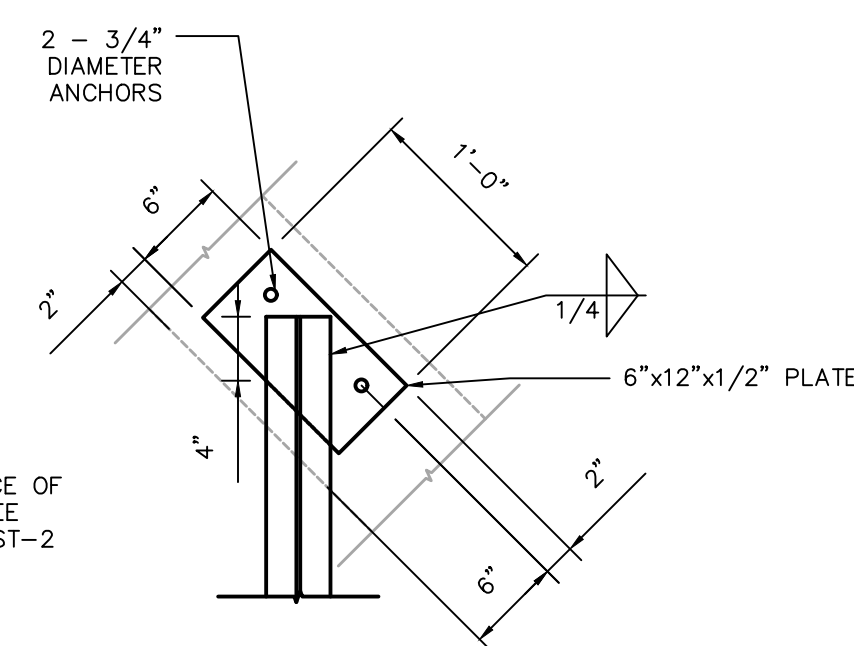
REPAIR ROOF PLAN
SCALE: 3/8" = 1'-0"



REPAIR SECTION A-A
SCALE: 3/8" = 1'-0"



REPAIR SECTION B-B
SCALE: 3/8" = 1'-0"



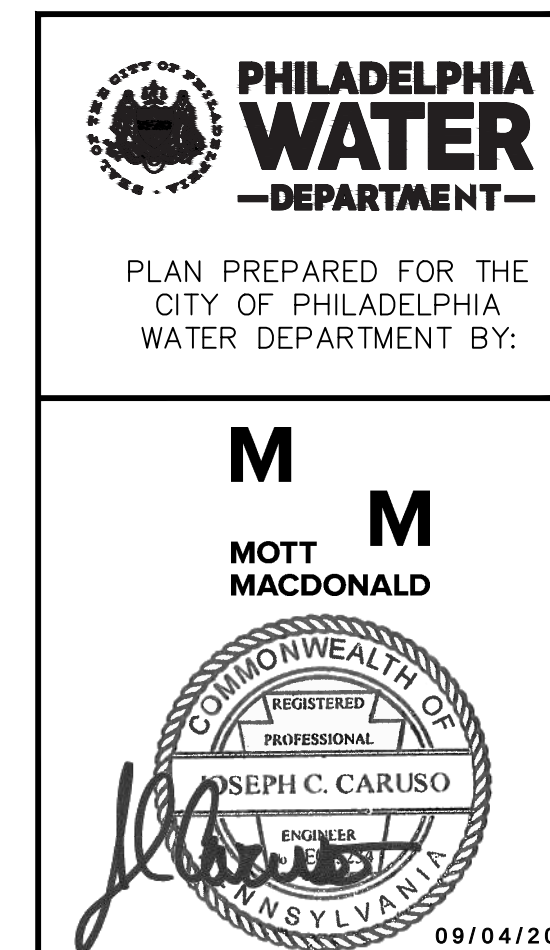
DETAIL 1/ST-4
SCALE: 1" = 1'-0"

- NOTES:
1. FOR GENERAL AND STRUCTURAL NOTES, SEE DRAWING ST-19.
 2. PROVIDE AND INSTALL WATERSTOP AND SEALANT BETWEEN THE JOINTS OF THE REMOVABLE SLAB.

SEWER RECONSTRUCTION PROJECT

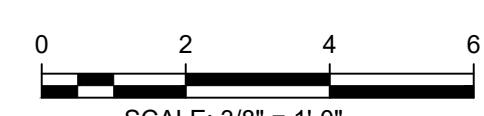
NORTHERN LIBERTIES FLOOD RELIEF PROGRAM PHASE VI

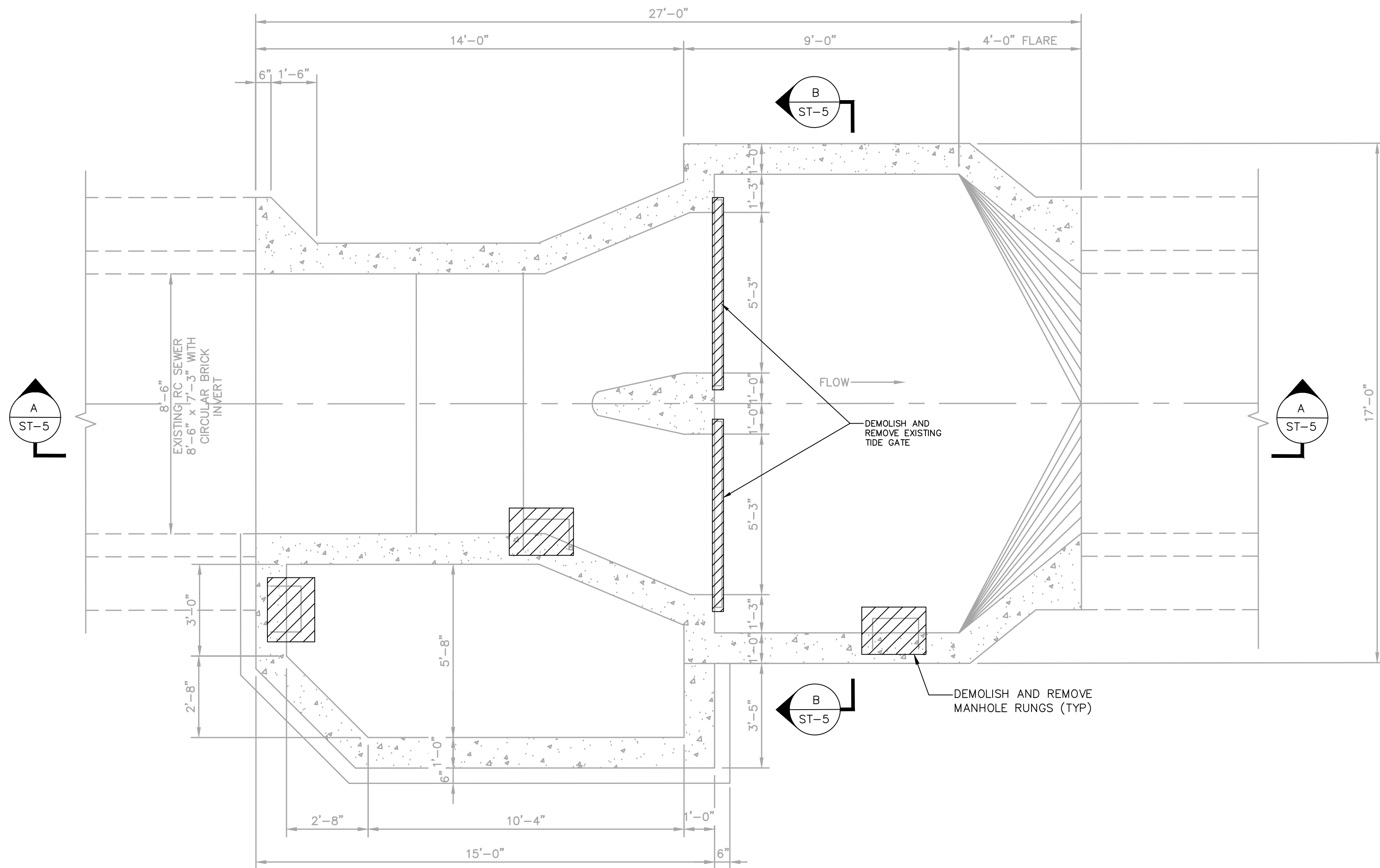
STRUCTURAL
SNYDER AVENUE AND RIVER STREET
CHAMBER D-68 REPAIR PLANS AND SECTIONS



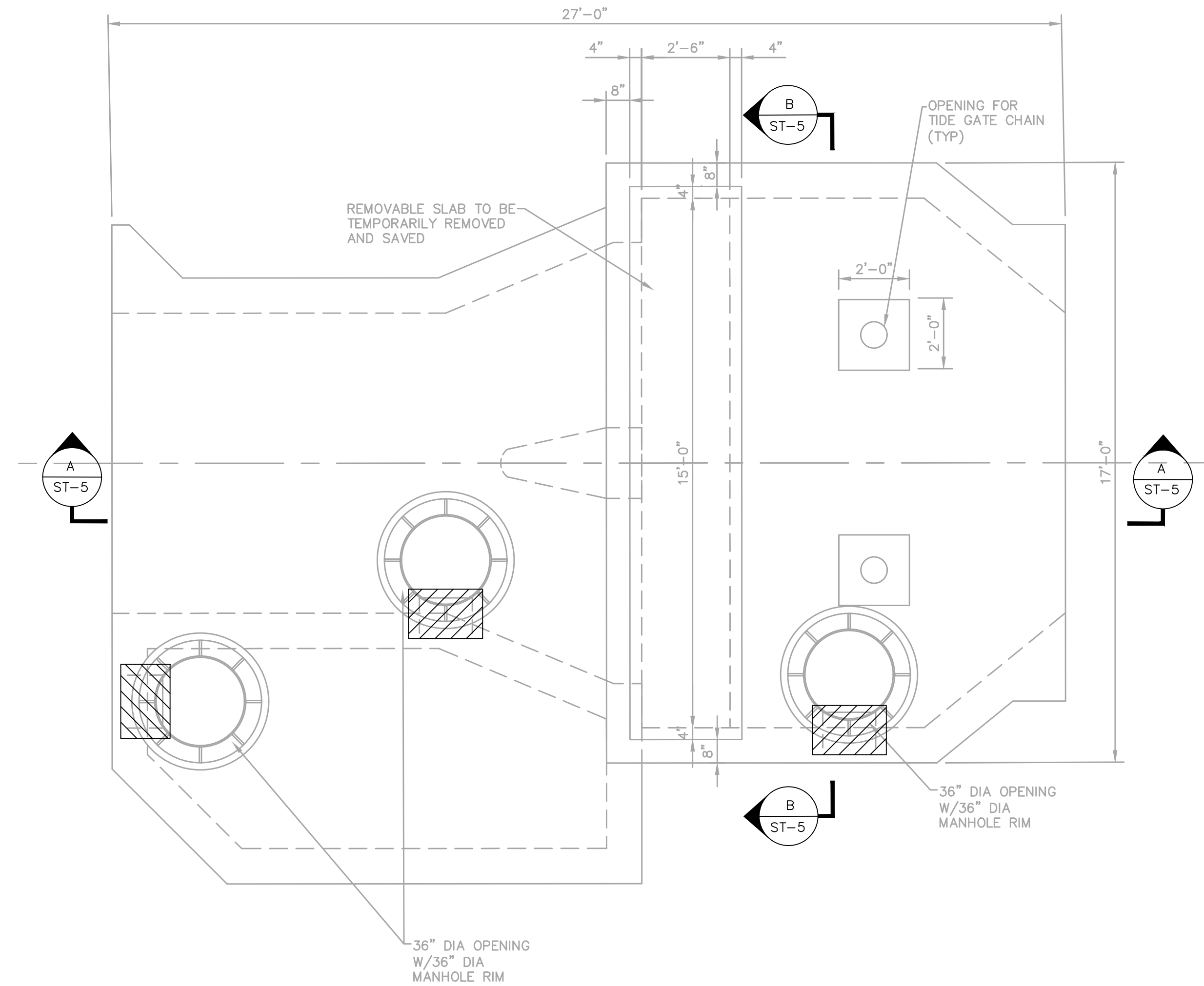
APPROVED 

WORK NO. S-40958-RD
SHEET NO. ST-4 OF 20 SHEETS

CITY OF PHILADELPHIA WATER DEPARTMENT		
SCALES:		
SECTIONS 3/8" = 1'-0"		
		
SCALE: 3/8" = 1'-0"		
DRAWN BY	C. THOMPSON	08/26/24
PROJECT ENGR.	J. CARUSO	08/26/24
SUPERVISOR		DATE



DEMOLITION FOUNDATION PLAN
SCALE: 3/8" = 1'-0"

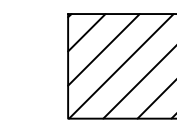


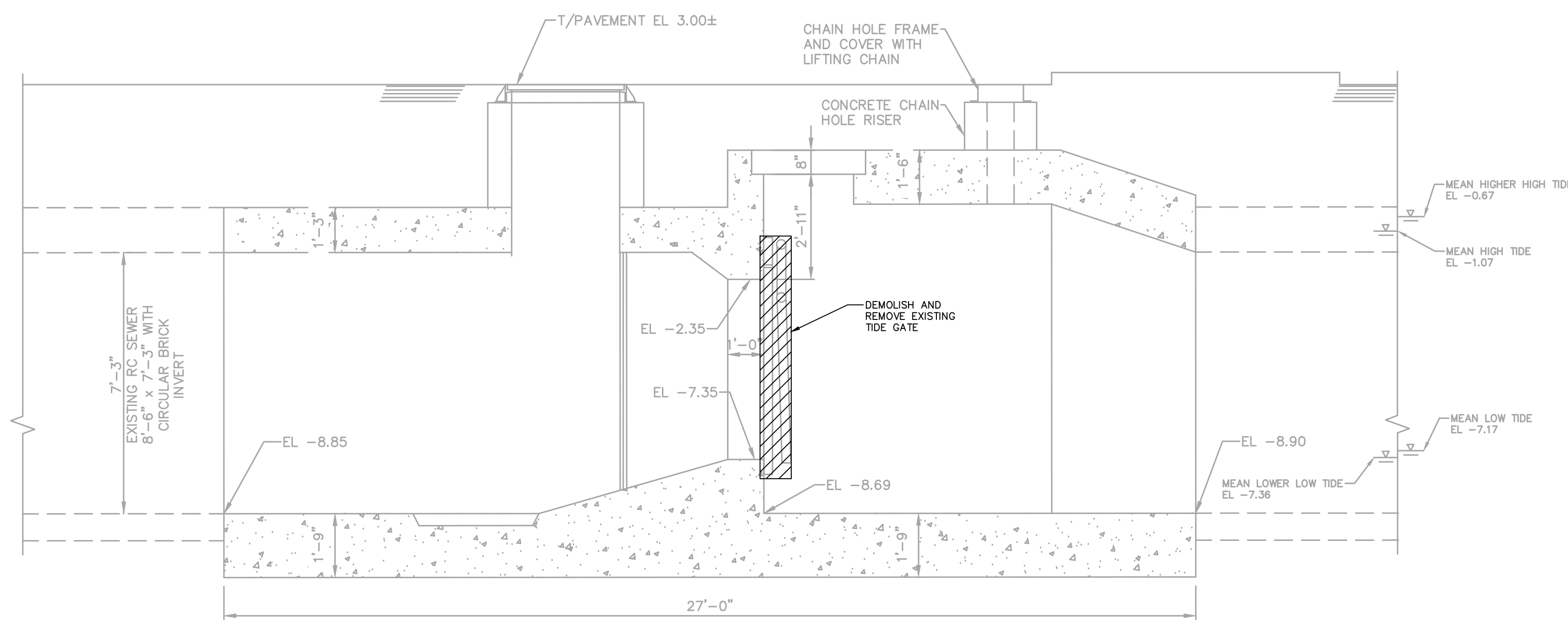
DEMOLITION ROOF PLAN
SCALE: 3/8" = 1'-0"

NOTES:

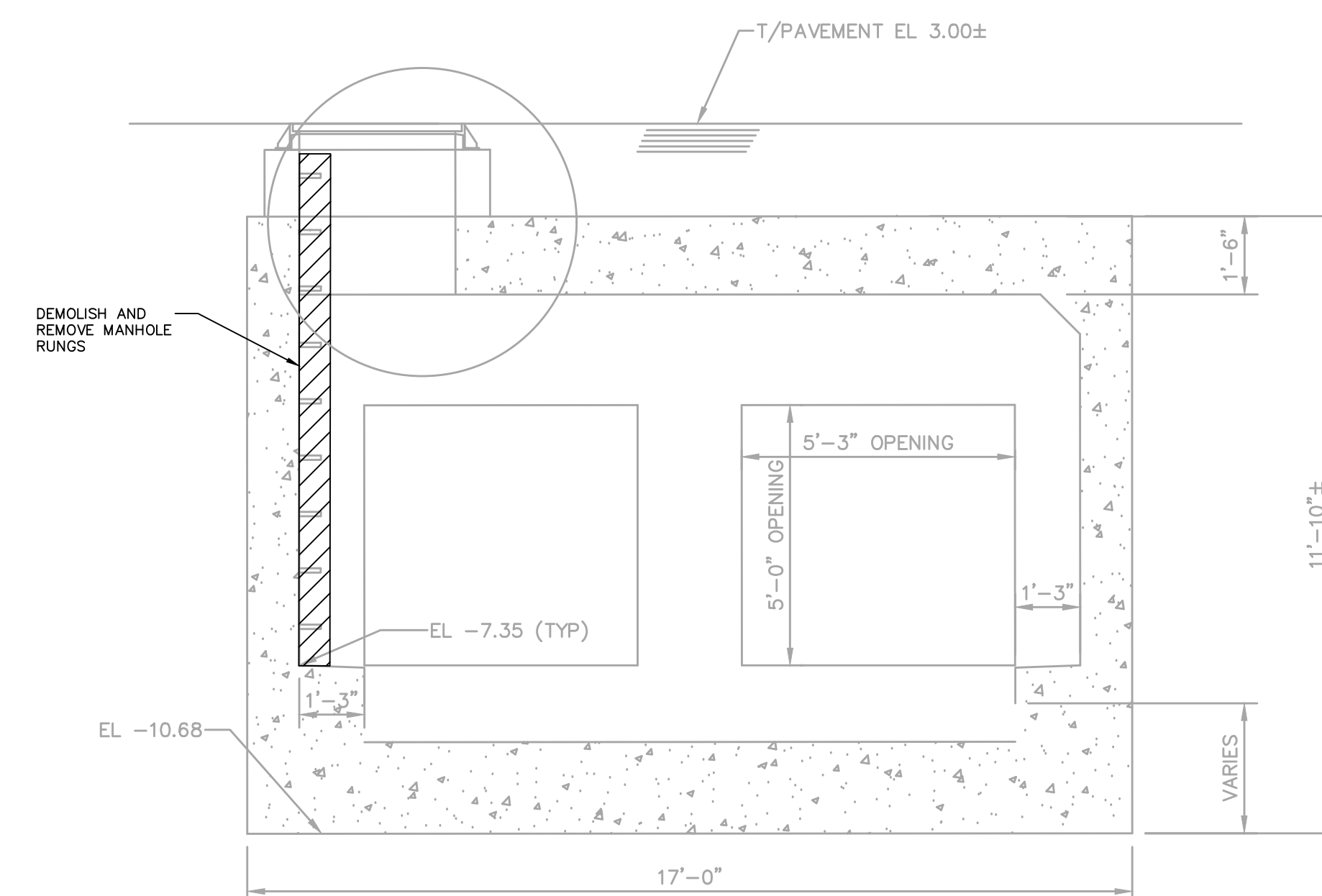
1. FOR GENERAL AND STRUCTURAL NOTES, SEE DRAWING ST-19.
2. COORDINATE REMOVAL EXTENT WITH NEW WORK SHOWN ON DRAWING ST-6.
3. CONTRACTOR SHALL VERIFY IN FIELD THE TYPE OF FRAME AROUND THE GATE.
4. IF WALL THIMBLE IS FOUND, IT MAY BE REMOVED WITH THE CONCRETE AROUND OPENING.
5. IF FRAME BOLTED TO CONCRETE IS FOUND, REMOVE THE FRAME AND REUSE THE ANCHOR BOLTS. IF THE ANCHOR BOLTS ARE CORRODED AND DAMAGED, CUT THE EXISTING ANCHORS AT FACE OF CONCRETE. COORDINATE WITH NOTE ON DRAWING ST-6.

LEGEND

 TO BE DEMOLISHED

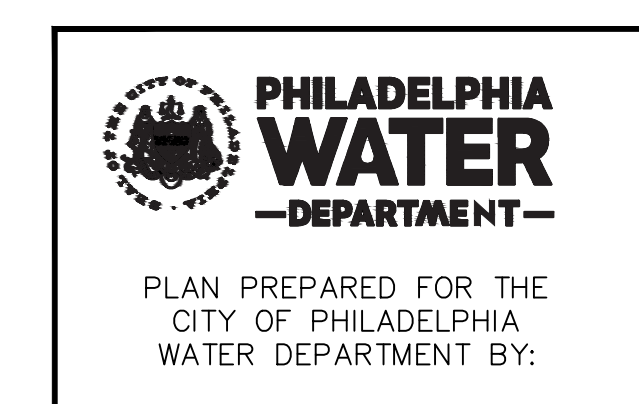
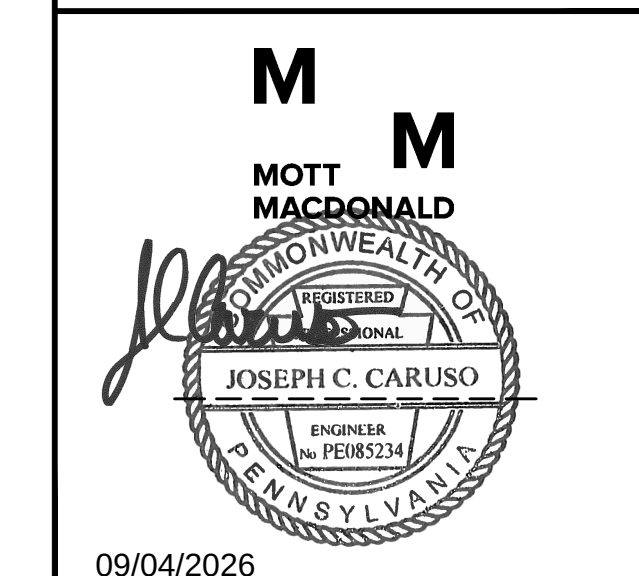


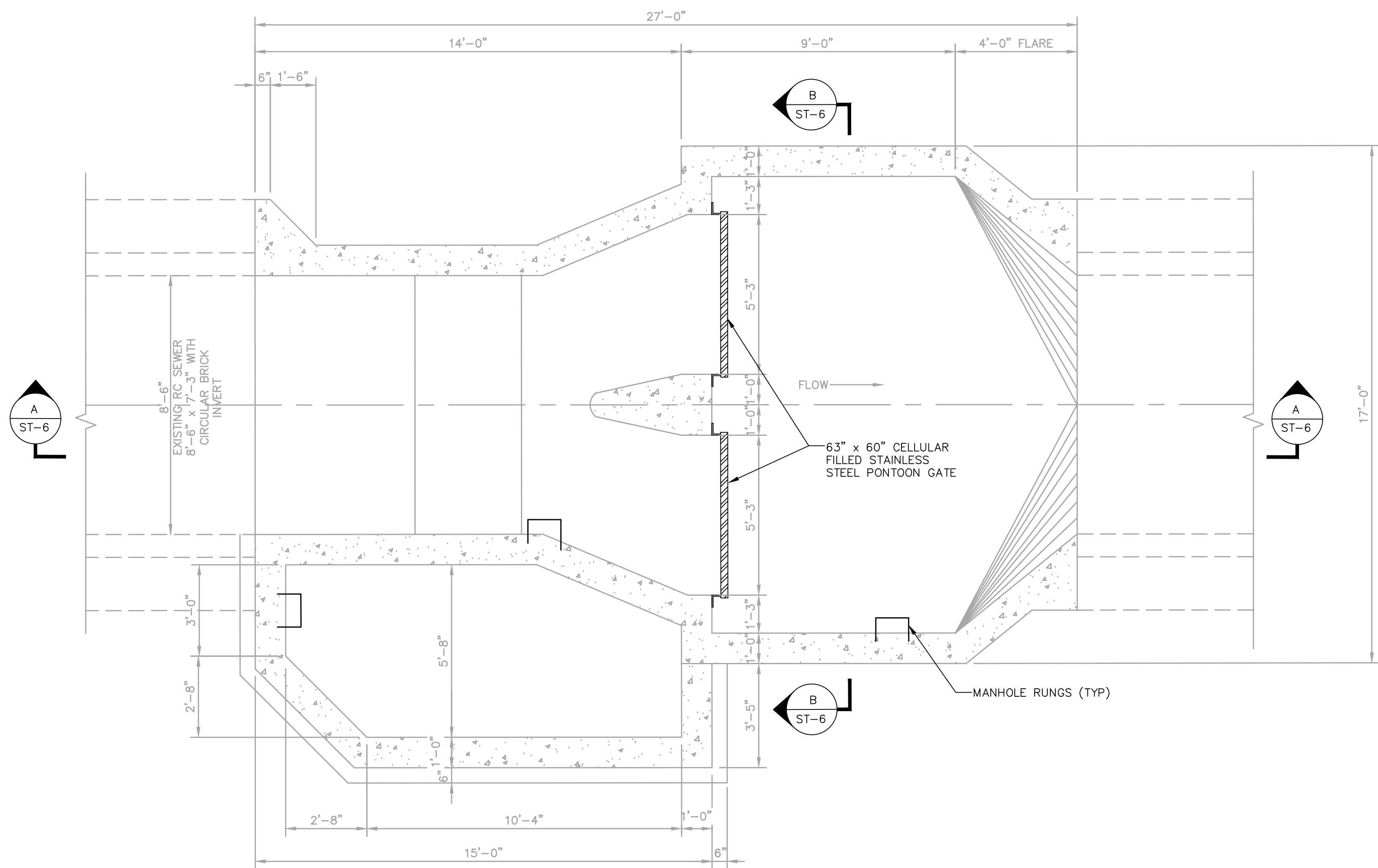
DEMOLITION SECTION A-A
SCALE: 3/8" = 1'-0"



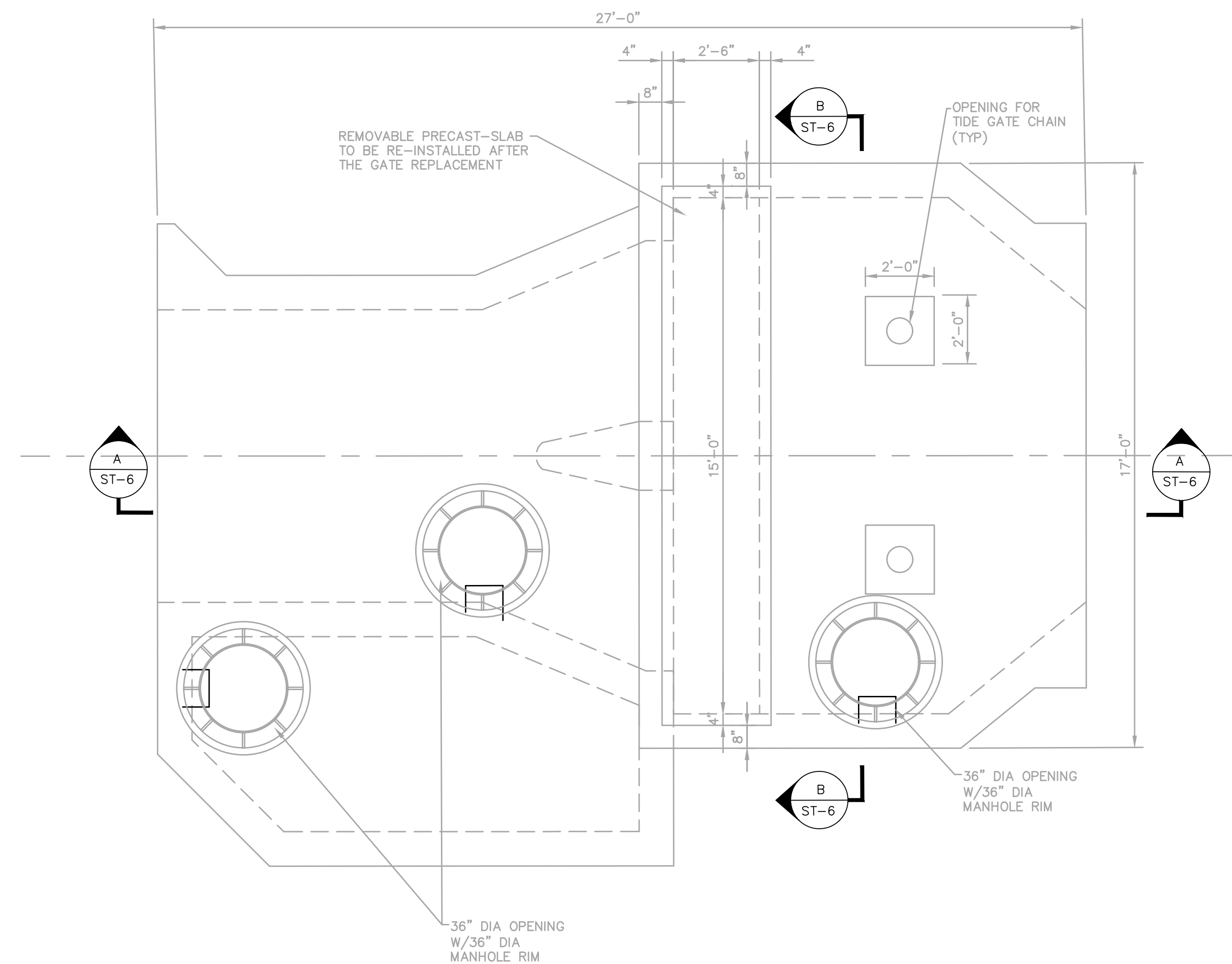
DEMOLITION SECTION B-B
SCALE: 3/8" = 1'-0"

SEWER RECONSTRUCTION PROJECT

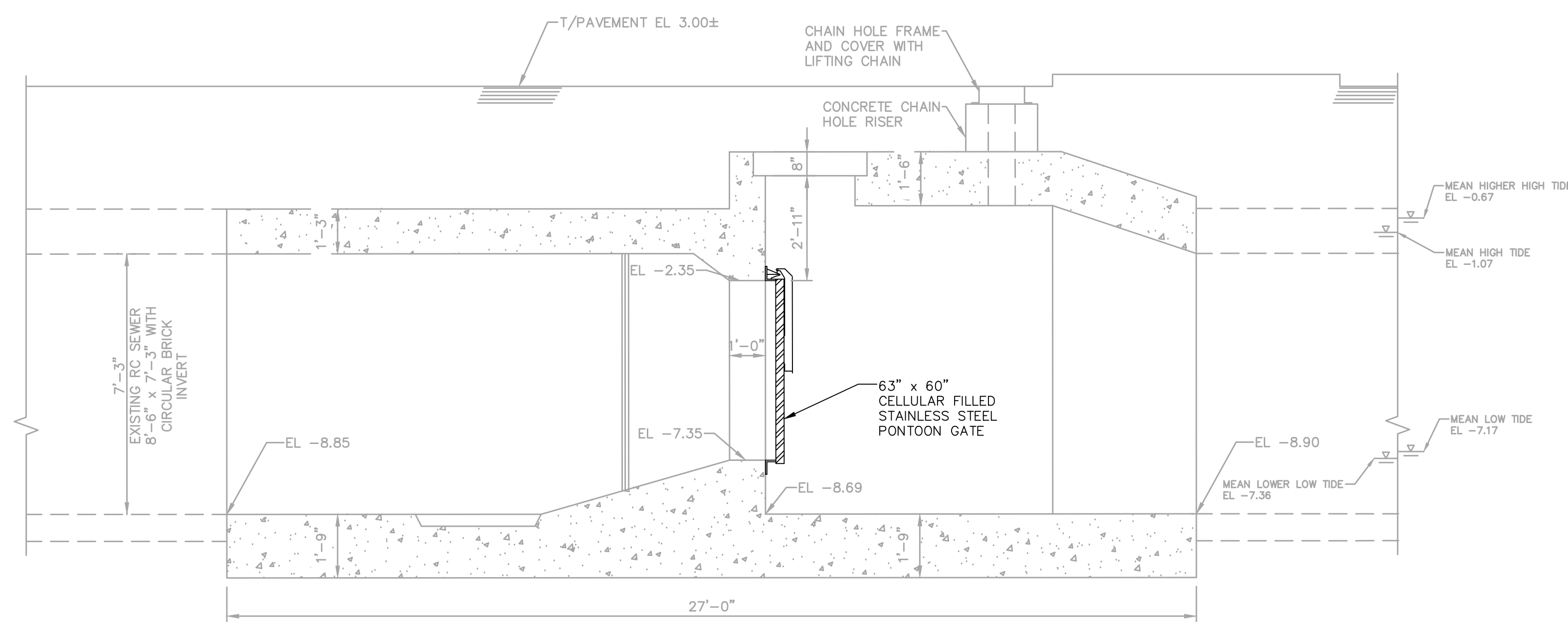
 PHILADELPHIA WATER DEPARTMENT PLAN PREPARED FOR THE CITY OF PHILADELPHIA WATER DEPARTMENT BY:	NORTHERN LIBERTIES FLOOD RELIEF PROGRAM PHASE VI STRUCTURAL DELAWARE AVENUE AND NORTH OF PORTER STREET CHAMBER D-69 DEMOLITION PLANS AND SECTIONS									
 JOSEPH C. CARUSO 09/04/2026	APPROVED  CITY OF PHILADELPHIA WATER DEPARTMENT SCALES: SECTIONS 3/8" = 1'-0" 0 2 4 6 SCALE: 3/8" = 1'-0" WORK NO. S-40958-RD SHEET NO. ST-5 OF 20 SHEETS <table border="1"> <tr> <td>DRAWN BY</td> <td>C. THOMPSON</td> <td>08/26/24</td> </tr> <tr> <td>PROJECT ENGR.</td> <td>J. CARUSO</td> <td>08/26/24</td> </tr> <tr> <td>SUPERVISOR</td> <td></td> <td>DATE</td> </tr> </table>	DRAWN BY	C. THOMPSON	08/26/24	PROJECT ENGR.	J. CARUSO	08/26/24	SUPERVISOR		DATE
DRAWN BY	C. THOMPSON	08/26/24								
PROJECT ENGR.	J. CARUSO	08/26/24								
SUPERVISOR		DATE								



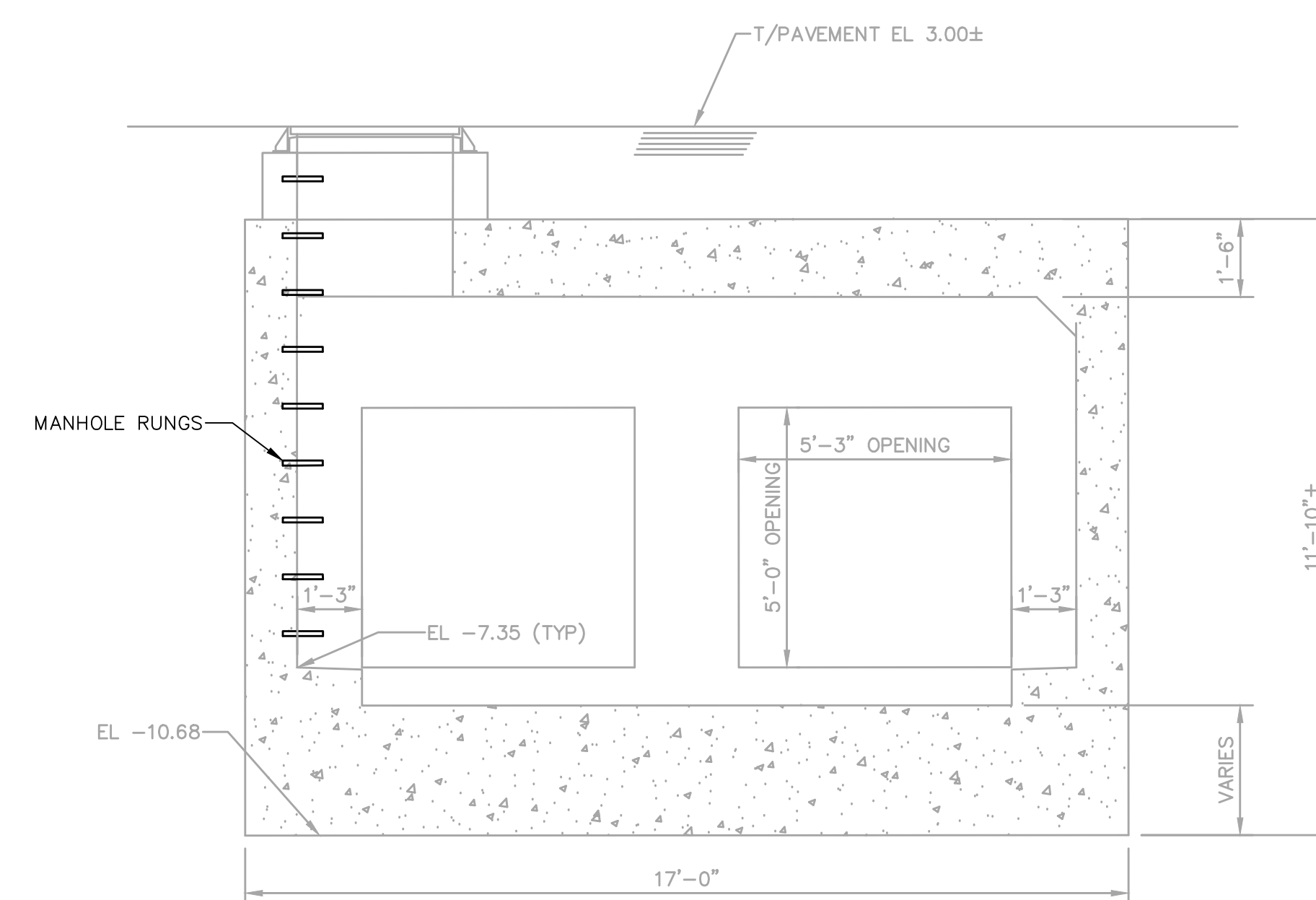
REPAIR FOUNDATION PLAN
SCALE: 3/8" = 1'-0"



REPAIR ROOF PLAN
SCALE: 3/8" = 1'-0"



REPAIR SECTION A-A
SCALE: 3/8" = 1'-0"



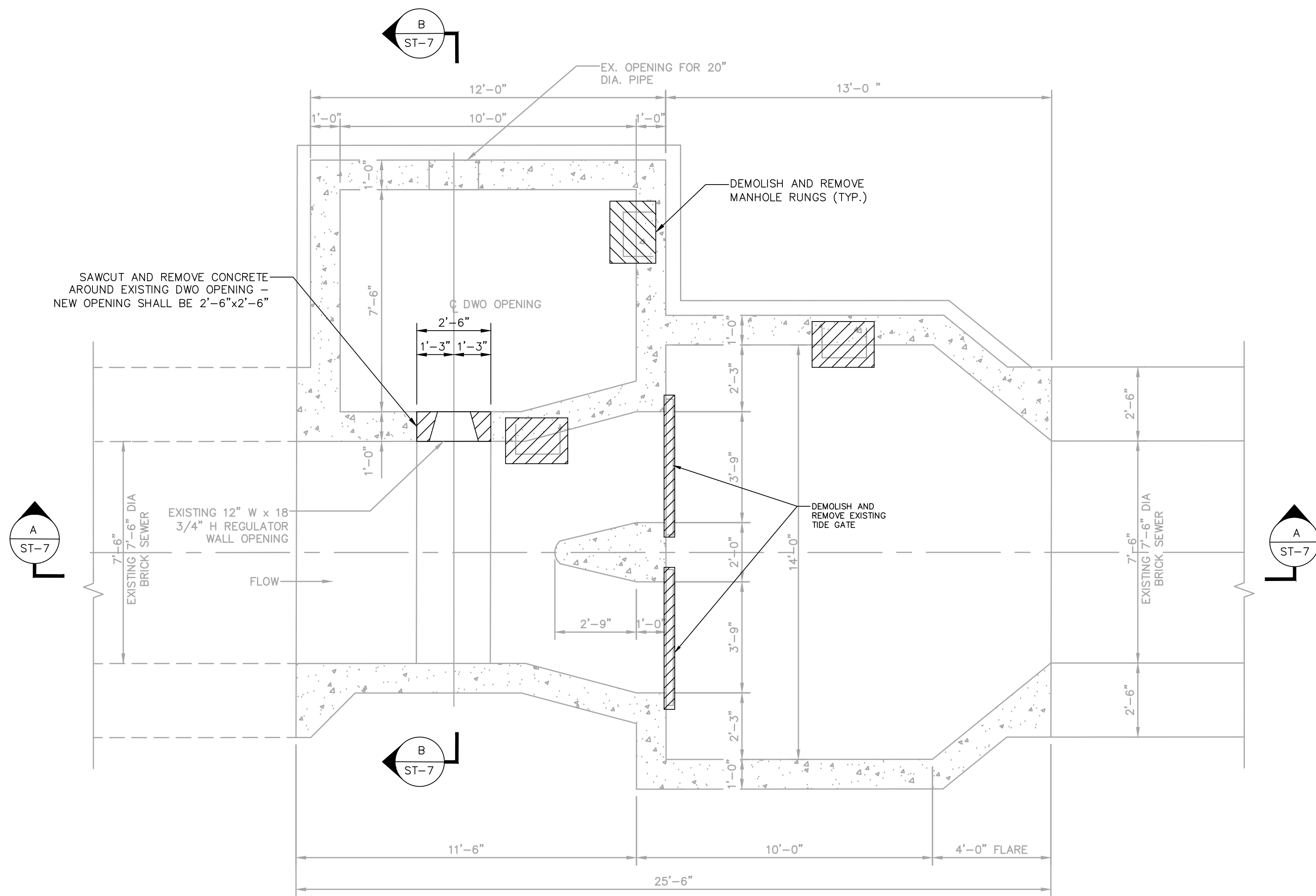
REPAIR SECTION B-B
SCALE: 3/8" = 1'-0"

NOTES:

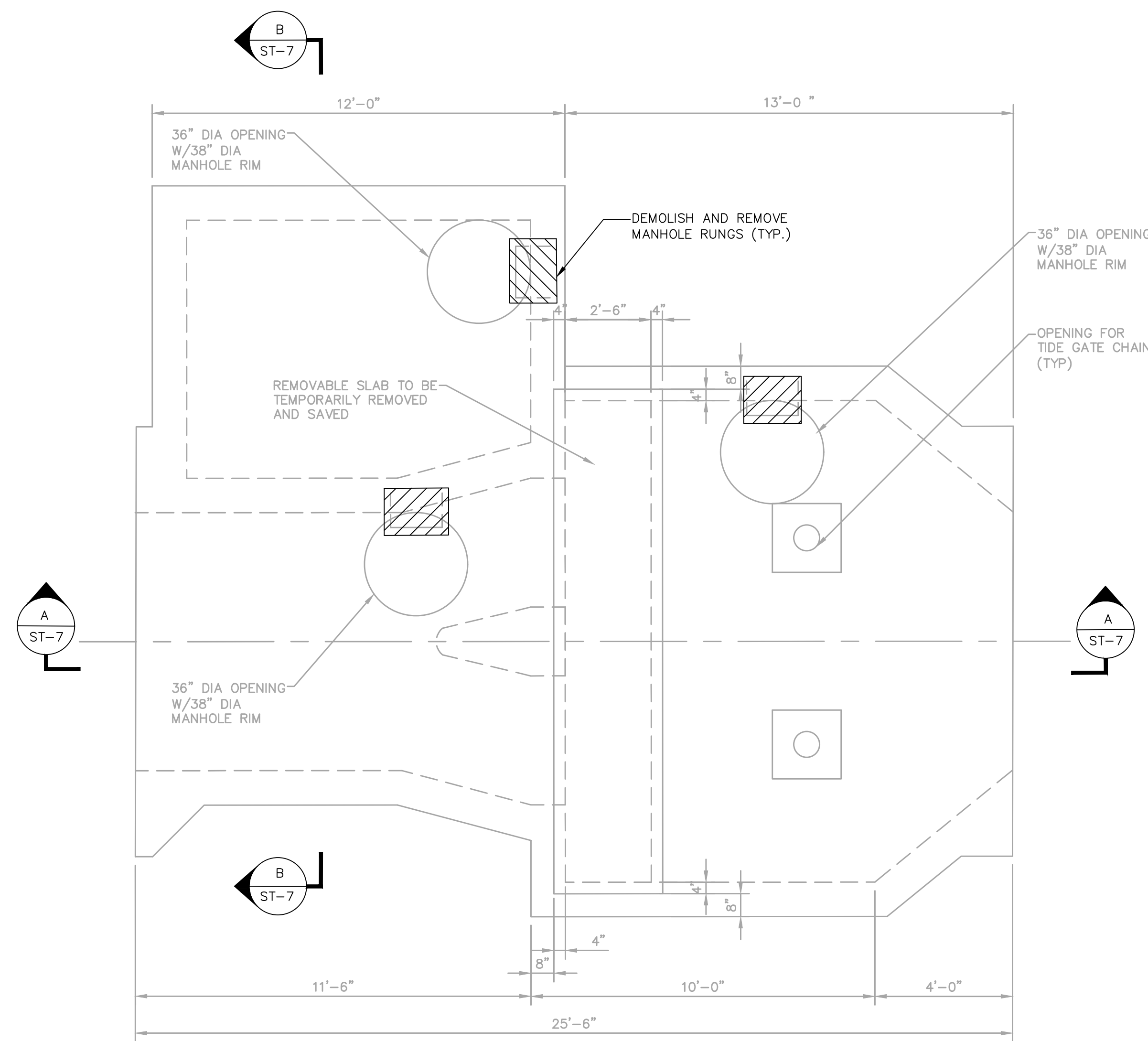
1. FOR GENERAL AND STRUCTURAL NOTES, SEE DRAWING ST-19.
2. CONTRACTOR SHALL VERIFY IN FIELD THE TYPE OF FRAME AROUND THE GATE.
3. AFTER THE WALL THIMBLE IS REMOVED, REPAIR CONCRETE WALL AROUND OPENING.
4. INSTALL NEW STAINLESS STEEL ANCHORS FOR GATE FRAME AS REQUIRED. COORDINATE WITH NOTE ON DRAWING ST-5.
5. PROVIDE AND INSTALL WATERSTOP AND SEALANT BETWEEN THE JOINTS OF THE REMOVABLE SLAB.

SEWER RECONSTRUCTION PROJECT

 PHILADELPHIA WATER DEPARTMENT PLAN PREPARED FOR THE CITY OF PHILADELPHIA WATER DEPARTMENT BY:	NORTHERN LIBERTIES FLOOD RELIEF PROGRAM PHASE VI STRUCTURAL DELAWARE AVENUE AND NORTH OF PORTER STEET CHAMBER D-69 REPAIR PLANS AND SECTIONS									
 MOTT MACDONALD JOSEPH L. CARUSO 09/04/2026	APPROVED  CITY OF PHILADELPHIA WATER DEPARTMENT SCALES: SECTIONS 3/8" = 1'-0" SCALE: 3/8" = 1'-0" WORK NO. S-40958-RD SHEET NO. ST-6 OF 20 SHEETS <table border="1"> <tr> <td>DRAWN BY</td> <td>C. THOMPSON</td> <td>08/26/24</td> </tr> <tr> <td>PROJECT ENGR.</td> <td>J. CARUSO</td> <td>08/26/24</td> </tr> <tr> <td>SUPERVISOR</td> <td></td> <td>DATE</td> </tr> </table>	DRAWN BY	C. THOMPSON	08/26/24	PROJECT ENGR.	J. CARUSO	08/26/24	SUPERVISOR		DATE
DRAWN BY	C. THOMPSON	08/26/24								
PROJECT ENGR.	J. CARUSO	08/26/24								
SUPERVISOR		DATE								



DEMOLITION FOUNDATION PLAN
SCALE: 3/8" = 1'-0"

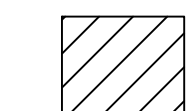


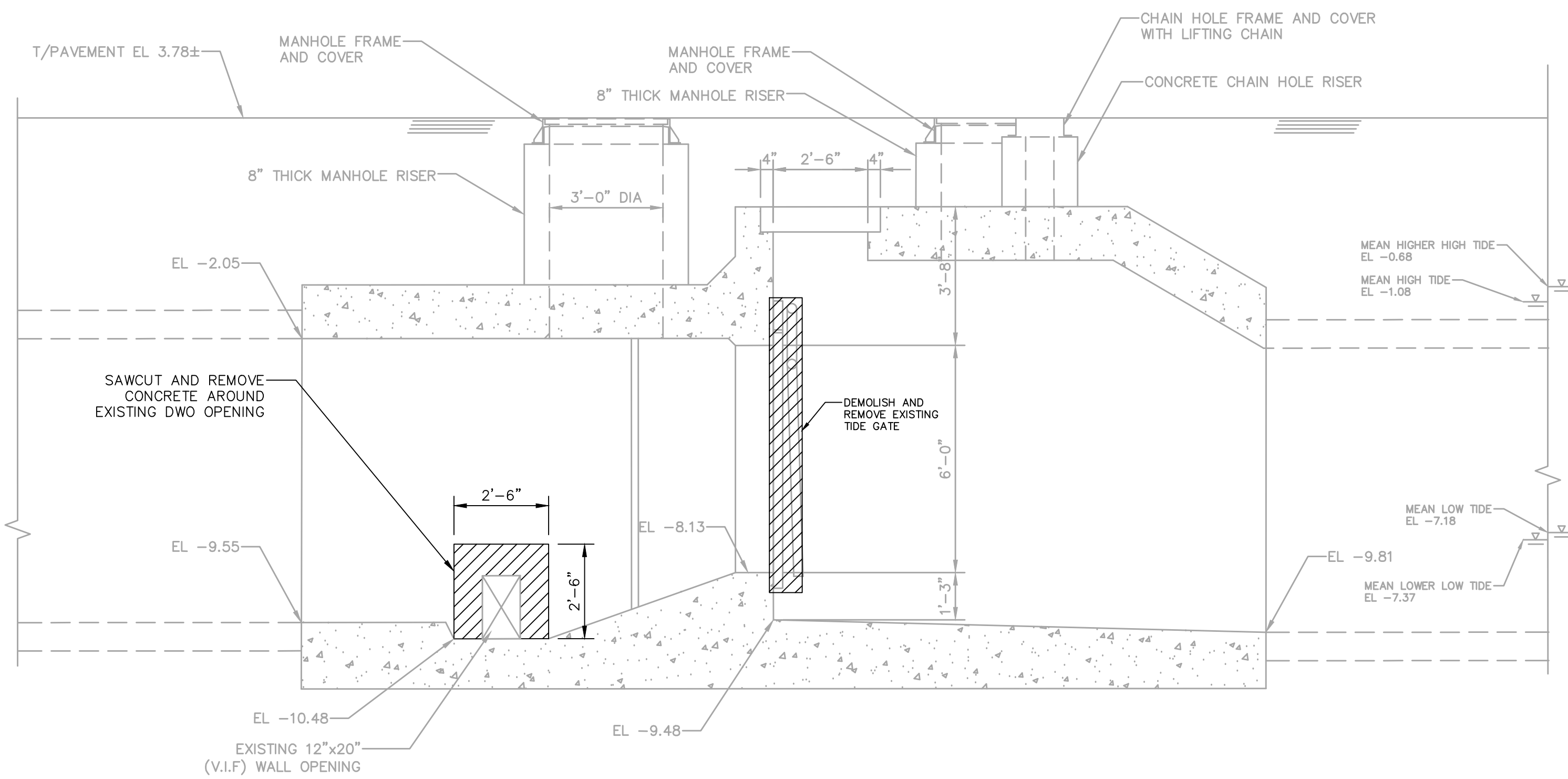
DEMOLITION ROOF PLAN
SCALE: 3/8" = 1'-0"

NOTES:

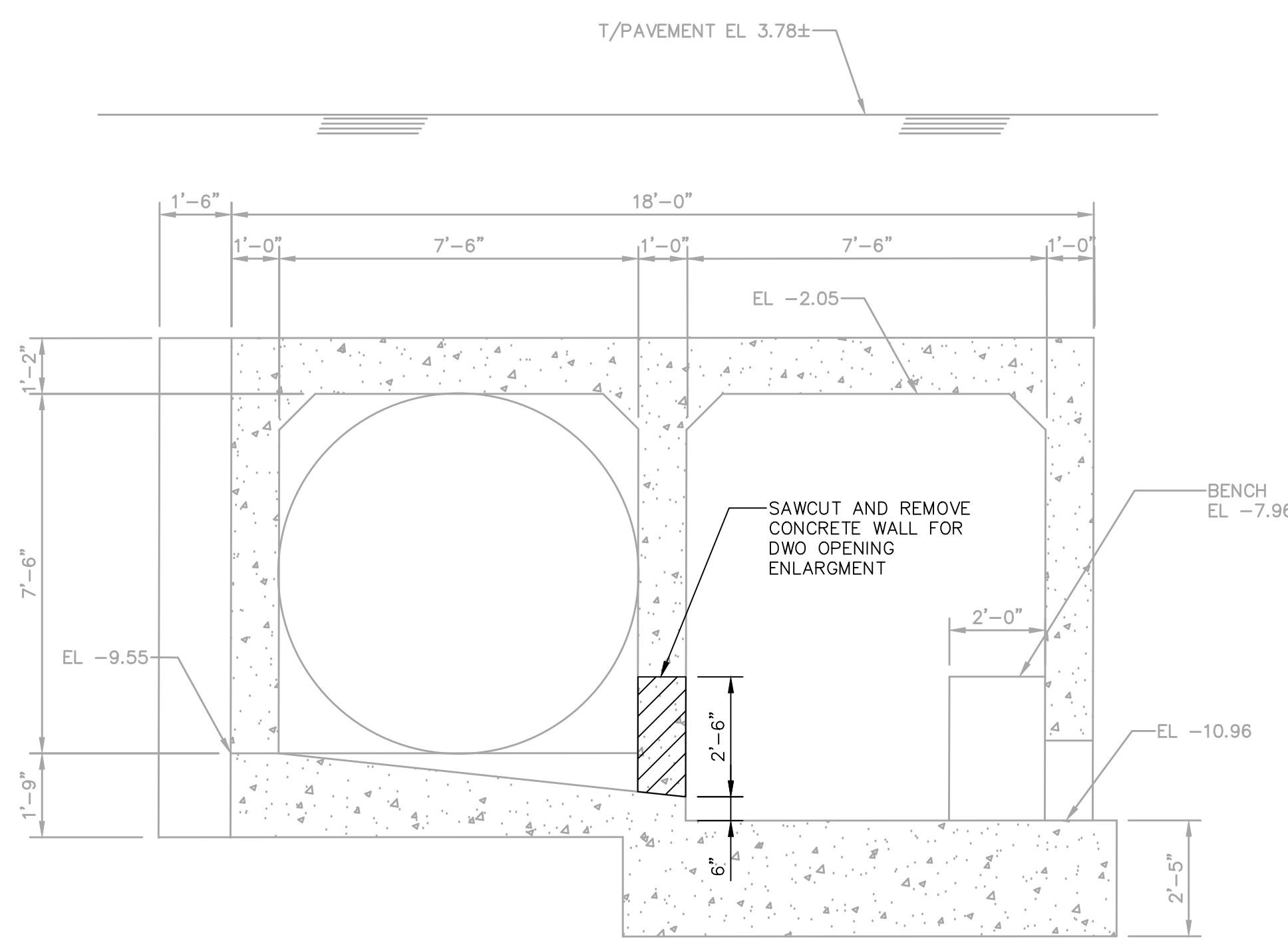
1. FOR GENERAL AND STRUCTURAL NOTES, SEE DRAWING ST-19.
2. COORDINATE REMOVAL EXTENT WITH NEW WORK SHOWN ON DRAWING ST-8.
3. CONTRACTOR SHALL VERIFY IN FIELD THE TYPE OF FRAME AROUND THE GATE.
4. IF WALL THIMBLE IS FOUND, IT MAY BE REMOVED WITH THE CONCRETE AROUND OPENING.
5. IF FRAME BOLTED TO CONCRETE IS FOUND, REMOVE THE FRAME AND REUSE THE ANCHOR BOLTS. IF THE ANCHOR BOLTS ARE CORRODED AND DAMAGED, CUT THE EXISTING ANCHORS AT FACE OF CONCRETE. COORDINATE WITH NOTE ON DRAWING ST-8.

LEGEND

 TO BE DEMOLISHED

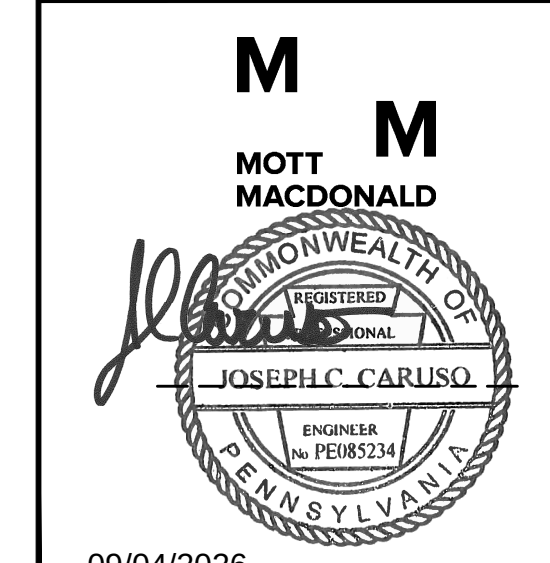


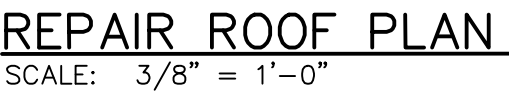
DEMOLITION SECTION A-A
SCALE: 3/8" = 1'-0"



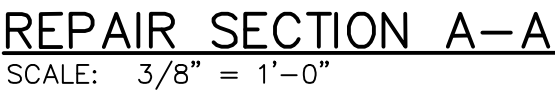
DEMOLITION SECTION B-B
SCALE: 3/8" = 1'-0"

SEWER RECONSTRUCTION PROJECT

 PHILADELPHIA WATER DEPARTMENT PLAN PREPARED FOR THE CITY OF PHILADELPHIA WATER DEPARTMENT BY:	NORTHERN LIBERTIES FLOOD RELIEF PROGRAM PHASE VI STRUCTURAL DELAWARE AVENUE AND OREGON AVENUE CHAMBER D-70 DEMOLITION PLANS AND SECTIONS									
 M M MOTT MACDONALD JOSEPH L. CARUSO REGISTERED PROFESSIONAL ENGINEER No. FE088324 PENNSYLVANIA 09/04/2026	APPROVED  CITY OF PHILADELPHIA WATER DEPARTMENT SCALES: SECTIONS 3/8" = 1'-0" SCALE: 3/8" = 1'-0" WORK NO. S-40958-RD SHEET NO. ST-7 OF 20 SHEETS <table><tr><td>DRAWN BY</td><td>C. THOMPSON</td><td>08/26/24</td></tr><tr><td>PROJECT ENGR.</td><td>J. CARUSO</td><td>08/26/24</td></tr><tr><td>SUPERVISOR</td><td></td><td>DATE</td></tr></table>	DRAWN BY	C. THOMPSON	08/26/24	PROJECT ENGR.	J. CARUSO	08/26/24	SUPERVISOR		DATE
DRAWN BY	C. THOMPSON	08/26/24								
PROJECT ENGR.	J. CARUSO	08/26/24								
SUPERVISOR		DATE								



- NOTES:
1. FOR GENERAL AND STRUCTURAL NOTES, SEE DRAWING ST-19.
 2. SEE DRAWING ST-20 FOR REPAIR OF CONCRETE AND EXPOSED REINFORCEMENT DETAILS DUE TO TWO OPENING ENLARGEMENT.
 3. CONTRACTOR SHALL VERIFY IN FIELD THE TYPE OF FRAME AROUND THE GATE.
 4. AFTER THE WALL THIMBLE IS REMOVED, REPAIR CONCRETE WALL AROUND OPENING.
 5. INSTALL NEW STAINLESS STEEL ANCHORS FOR GATE FRAME AS REQUIRED. COORDINATE WITH NOTE ON DRAWING ST-7.
 6. PROVIDE AND INSTALL WATERSTOP AND SEALANT BETWEEN THE JOINTS OF THE REMOVABLE SLAB.



SEWER RECONSTRUCTION PROJECT



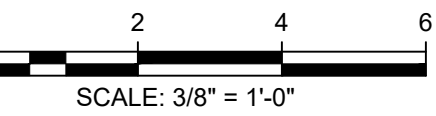
NORTHERN LIBERTIES FLOOD RELIEF PROGRAM PHASE V

STRUCTURAL
DELAWARE AVENUE AND OREGON AVENUE
CHAMBER D-70 REPAIR PLANS AND SECTION

APPROVED  _____
MATT MACDONALD

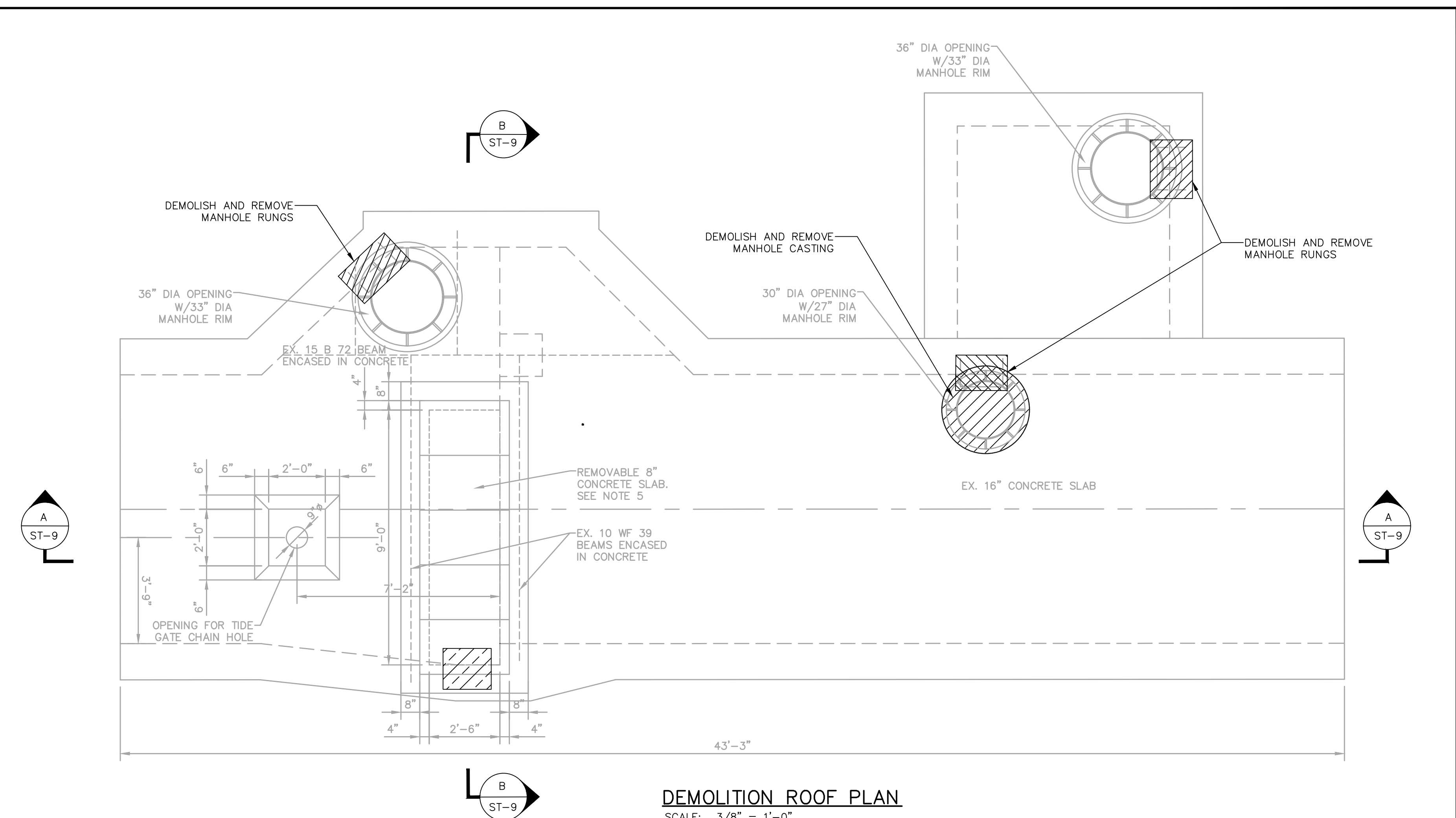
CITY OF PHILADELPHIA
WATER DEPARTMENT

SECTIONS 3/8" = 1'-0"

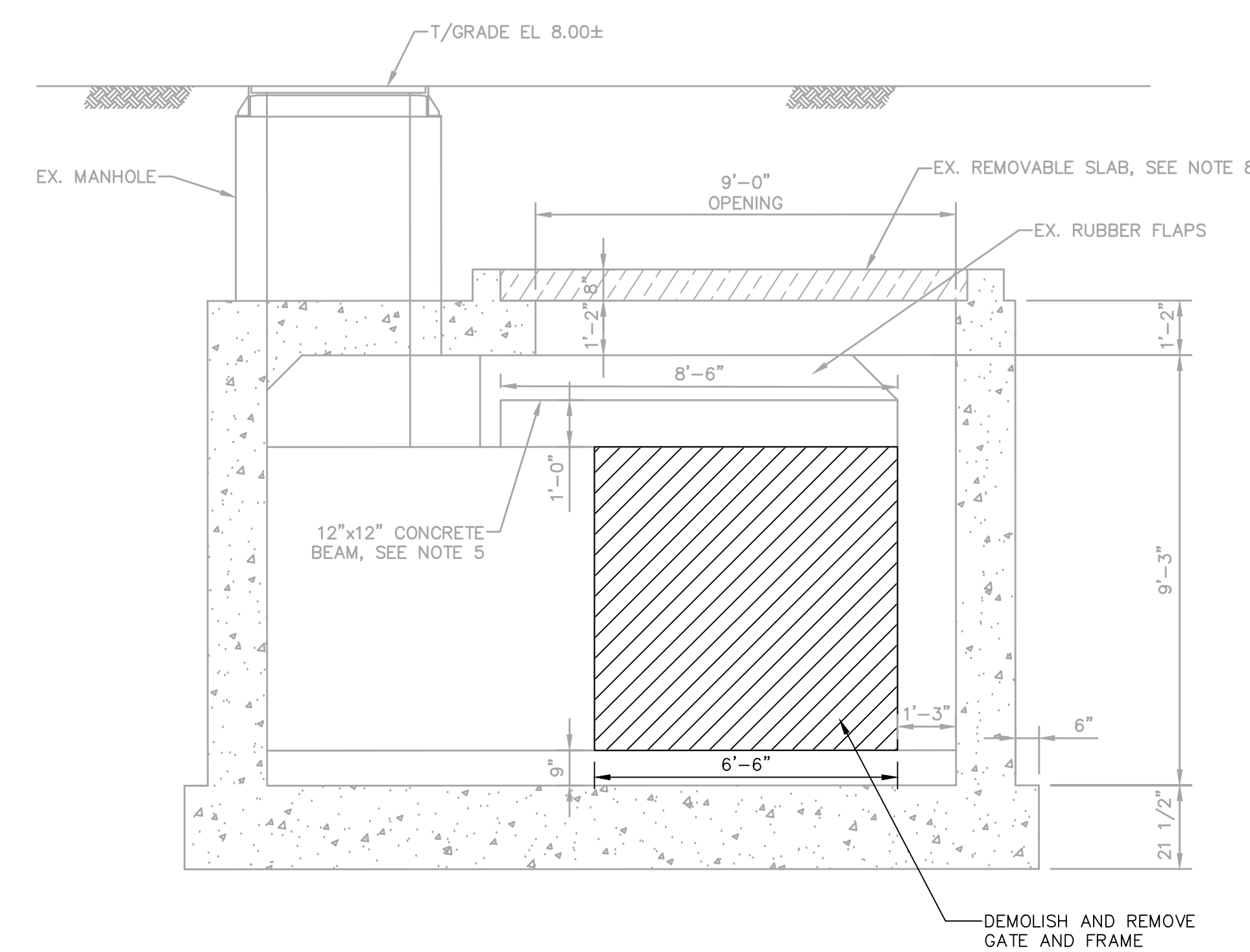


WORK NO. S-40958-RD
SHEET NO. ST-8 OF 20 SHEETS

DRAWN BY	C. THOMPSON	08/26/2020
PROJECT ENGR.	J. CARUSO	08/26/2020
		09/04/2020
SUPERVISOR		DATE



- NOTES:
1. FOR GENERAL AND STRUCTURAL NOTES, SEE DRAWING ST-19.
 2. NOTE TO CONTRACTOR: EXISTING DRAWING DOCUMENTATION FOR THIS CHAMBER DOES NOT MATCH FIELD OBSERVATIONS. CONTRACTOR TO VERIFY DIMENSIONS PRIOR TO CONSTRUCTION.
 3. COORDINATE REMOVAL EXTENT WITH NEW WORK SHOWN ON DRAWING ST-10.
 4. THE EXISTING REMOVABLE SLAB SHALL BE CAREFULLY REMOVED AND SAVED. DO NOT DAMAGE THE SLAB.



LEGEND

 TO BE DEMOLISHED

SEWER RECONSTRUCTION PROJECT



**PHILADELPHIA
WATER
DEPARTMENT**

PLAN PREPARED FOR THE
CITY OF PHILADELPHIA
WATER DEPARTMENT BY:

NORTHERN LIBERTIES FLOOD RELIEF PROGRAM PHASE VI

STRUCTURAL VANDIKE STREET CHAMBER F-11 DEMOLITION PLANS AND SECTIONS

M M

**MOTT
MACDONALD**

Joseph MacCaruso



APPROVED *Joe MacCaruso*

JOE MACDONALD

CITY OF PHILADELPHIA
WATER DEPARTMENT

SCALE:

SECTIONS $3/8" = 1'-0"$



SCALE: 3/8" = 1'-0"

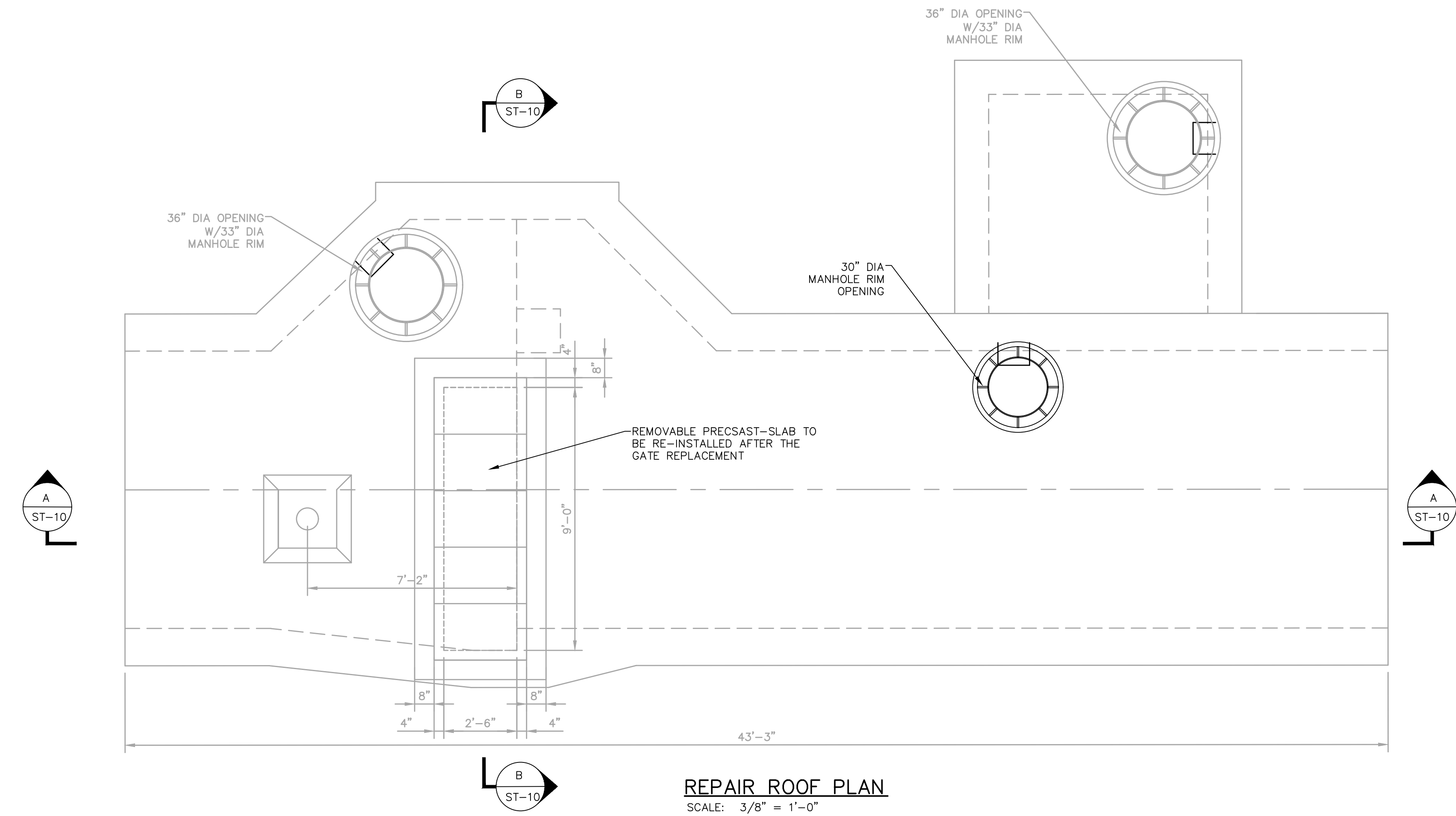
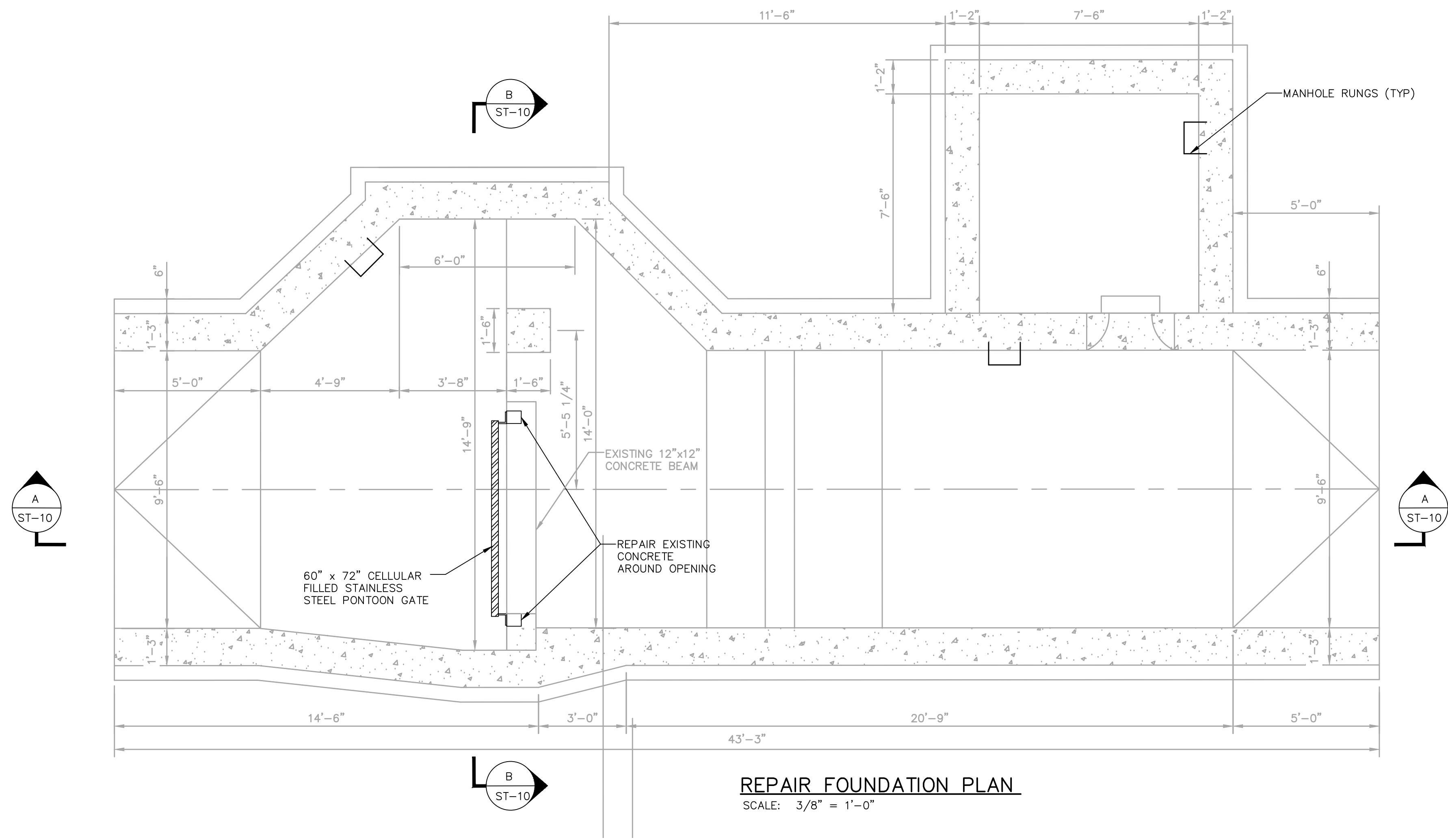
09/04/2026

WORK NO. S-40958-RD

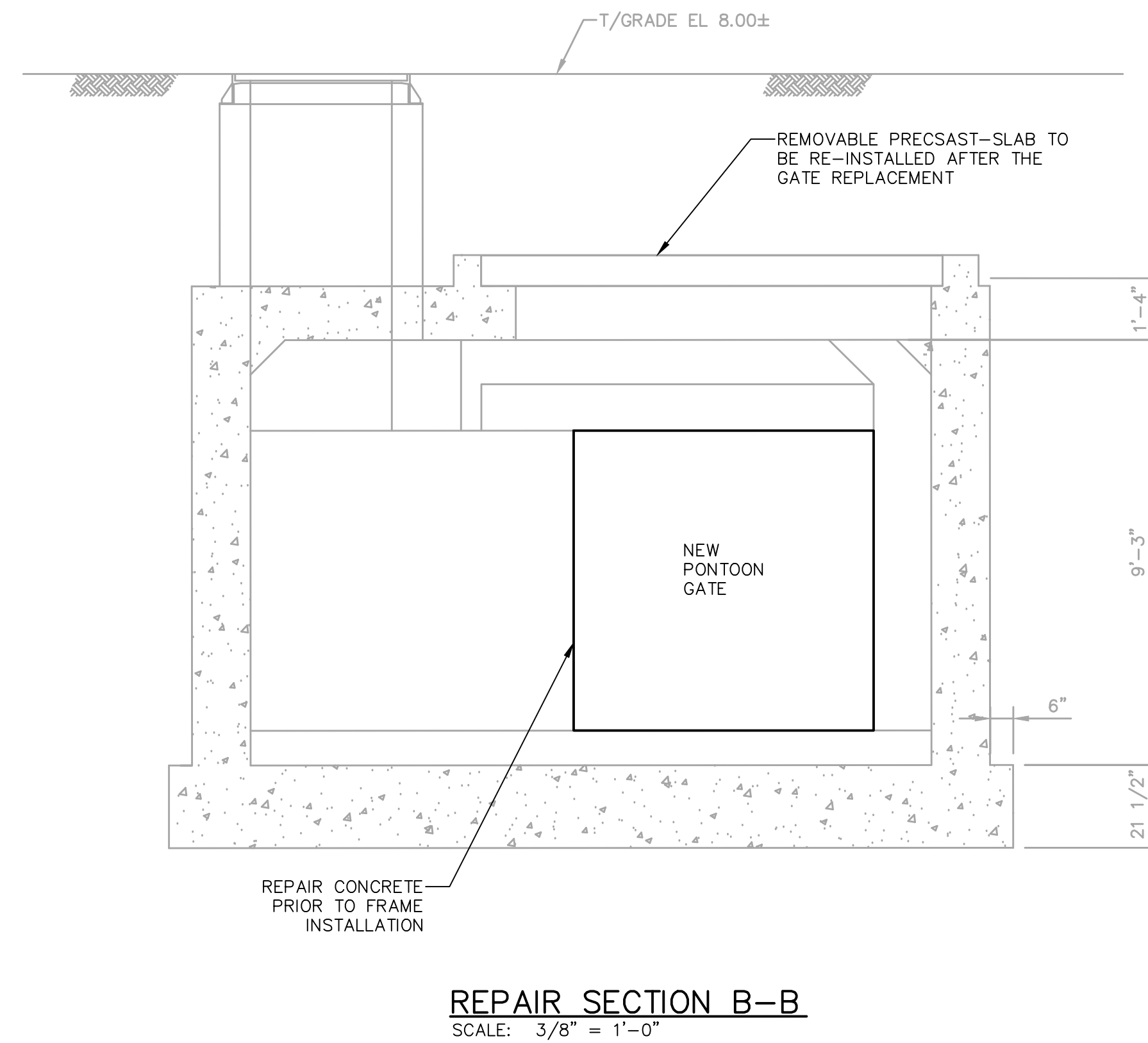
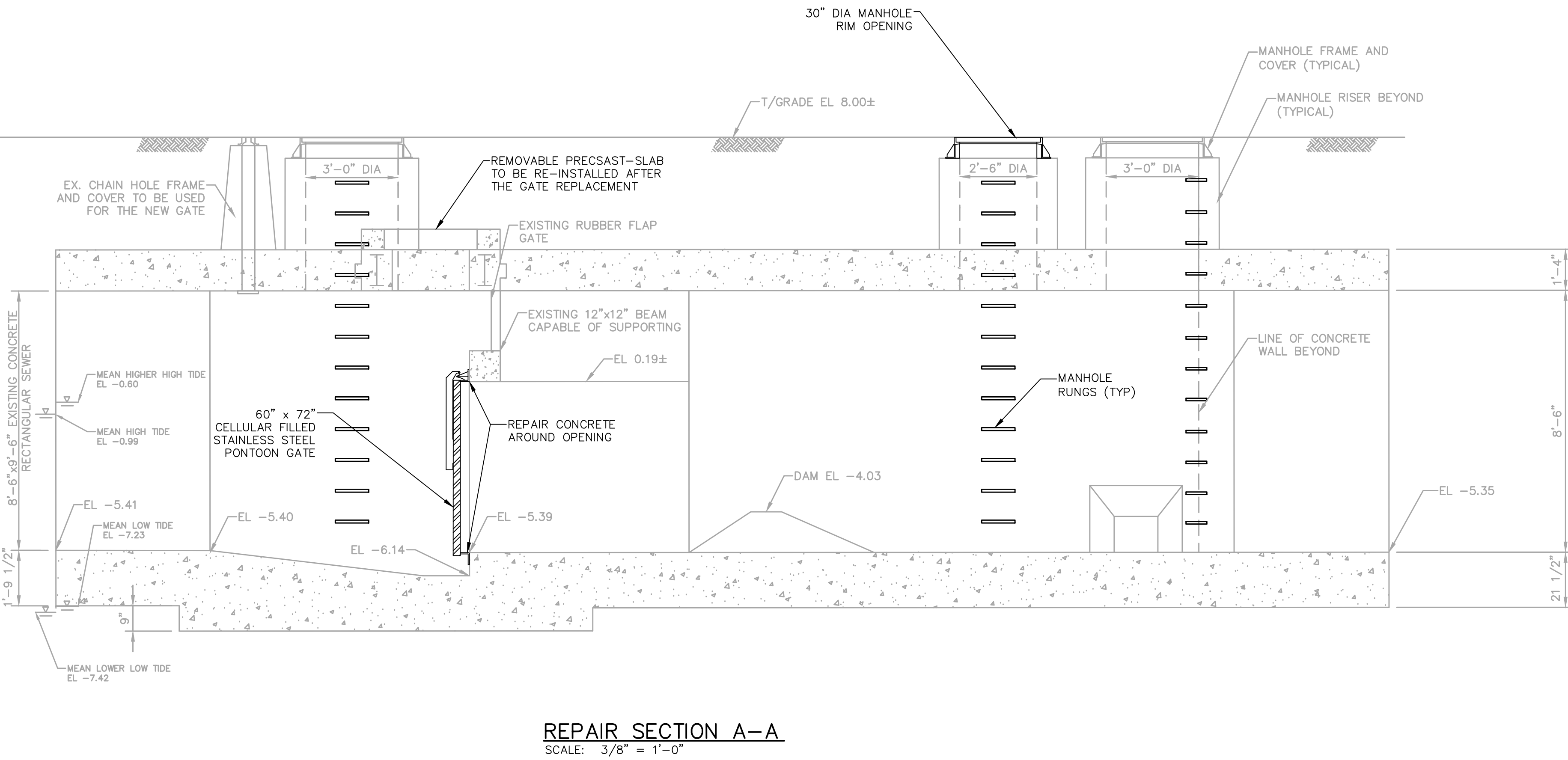
SHEET NO. ST-9 OF 20 SHEETS

DRAWN BY	C. THOMPSON	08/26/24
PROJECT ENGR.	J. CARUSO	08/26/24
		09/04/2026
SUPERVISOR		DATE

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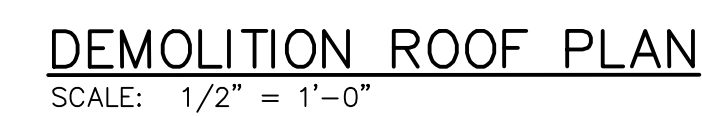


- NOTES:
- FOR GENERAL AND STRUCTURAL NOTES, SEE DRAWING ST-19.
 - COORDINATE THE NEW PONTOON GATE AND PROVIDE TO FIT THE EXISTING CHAIN HOLE AND THE EXISTING ROOF OPENING. KEEP EXISTING REMOVABLE SLAB IN GOOD CONDITIONS. IF DETERIORATION OF THE SLAB IS OBSERVED DURING CONSTRUCTION, REPLACE WITH 8" REMOVABLE PRECAST PLANKS.
 - THE CONTRACTOR SHALL REPLACE THE EXISTING RUBBER FLAP GATES. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION
 - PROVIDE AND INSTALL WATERSTOP AND SEALANT BETWEEN THE JOINTS OF THE REMOVABLE SLAB.



SEWER RECONSTRUCTION PROJECT

 PHILADELPHIA WATER DEPARTMENT PLAN PREPARED FOR THE CITY OF PHILADELPHIA WATER DEPARTMENT BY:	NORTHERN LIBERTIES FLOOD RELIEF PROGRAM PHASE VI										
	STRUCTURAL VANDIKE STREET CHAMBER F-11 REPAIR PLANS AND SECTIONS										
 MOTT MACDONALD JOSEPH C. CARUSO ENGINEER 08/04/2024	APPROVED MOTT MACDONALD	CITY OF PHILADELPHIA WATER DEPARTMENT SCALES: SECTIONS 3/8" = 1'-0" SCALE: 3/8" = 1'-0"									
	WORK NO. S-40958-RD SHEET NO. ST-10 OF 20 SHEETS										
		<table><tr><td>DRAWN BY</td><td>C. THOMPSON</td><td>08/26/24</td></tr><tr><td>PROJECT ENGR.</td><td>J. CARUSO</td><td>08/26/24</td></tr><tr><td>SUPERVISOR</td><td></td><td>DATE</td></tr></table>	DRAWN BY	C. THOMPSON	08/26/24	PROJECT ENGR.	J. CARUSO	08/26/24	SUPERVISOR		DATE
DRAWN BY	C. THOMPSON	08/26/24									
PROJECT ENGR.	J. CARUSO	08/26/24									
SUPERVISOR		DATE									



- NOTES:
1. FOR GENERAL AND STRUCTURAL NOTES, SEE DRAWING ST-19.
 2. COORDINATE REMOVAL EXTENT WITH NEW WORK SHOWN ON DRAWING ST-12.
 3. MONITOR RCP OUTFALL FOR MOVEMENT THROUGHOUT AND CONSTRUCTION AND REPAIR CRACKS, GAPS AND DEFECTIVE CONCRETE.

LEGEND

 TO BE DEMOLISHED



SEWER RECONSTRUCTION PROJECT

NORTHERN LIBERTIES FLOOD RELIEF PROGRAM PHASE VI

STRUCTURAL
RIVER FIELDS DRIVE
CHAMBER S-22 DEMOLITION PLANS AND SECTIONS

APPROVED 
MATT MACDONALD

WORK NO. S-40958-RD
SHEET NO. ST-11 OF 20 SHEETS

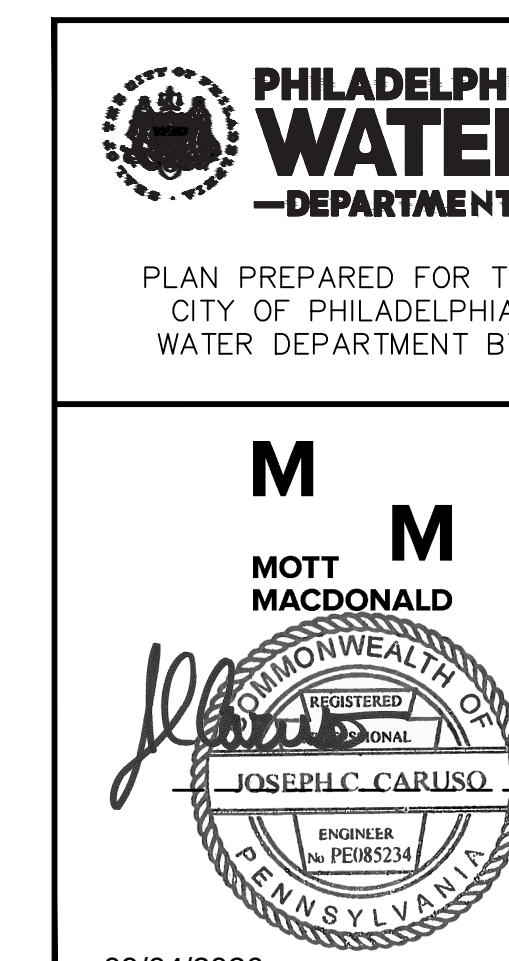
CITY OF PHILADELPHIA
WATER DEPARTMENT

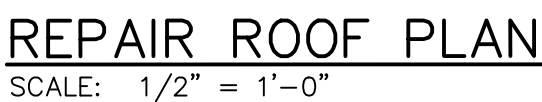
SCALES:

SECTIONS 1 1/2" = 1'-0"

SCALE: 1/2" = 1'-0"

DRAWN BY	C. THOMPSON	08/26/24
PROJECT, ENGR.	J. CARUSO	08/26/24
		09/04/2026
SUBCOMPAR		DATE





- NOTES:
1. FOR GENERAL AND STRUCTURAL NOTES, SEE DRAWING ST-19.
 2. MONITOR RCP OUTFALL FOR MOVEMENT THROUGHOUT DEMOLITION AND CONSTRUCTION AND REPAIR CRACKS, GAPS AND DEFECTIVE CONCRETE.
 3. PROVIDE AND INSTALL WATERSTOP AND SEALANT BETWEEN THE JOINTS OF THE REMOVABLE SLAB.



SEWER RECONSTRUCTION PROJECT

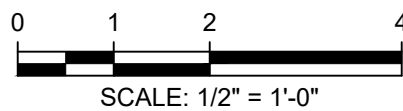
NORTHERN LIBERTIES FLOOD RELIEF PROGRAM PHASE VI

STRUCTURAL
RIVER FIELDS DRIVE
CHAMBER S-22 REPAIR PLANS AND SECTIONS

APPROVED _____
MATT MACDONALD

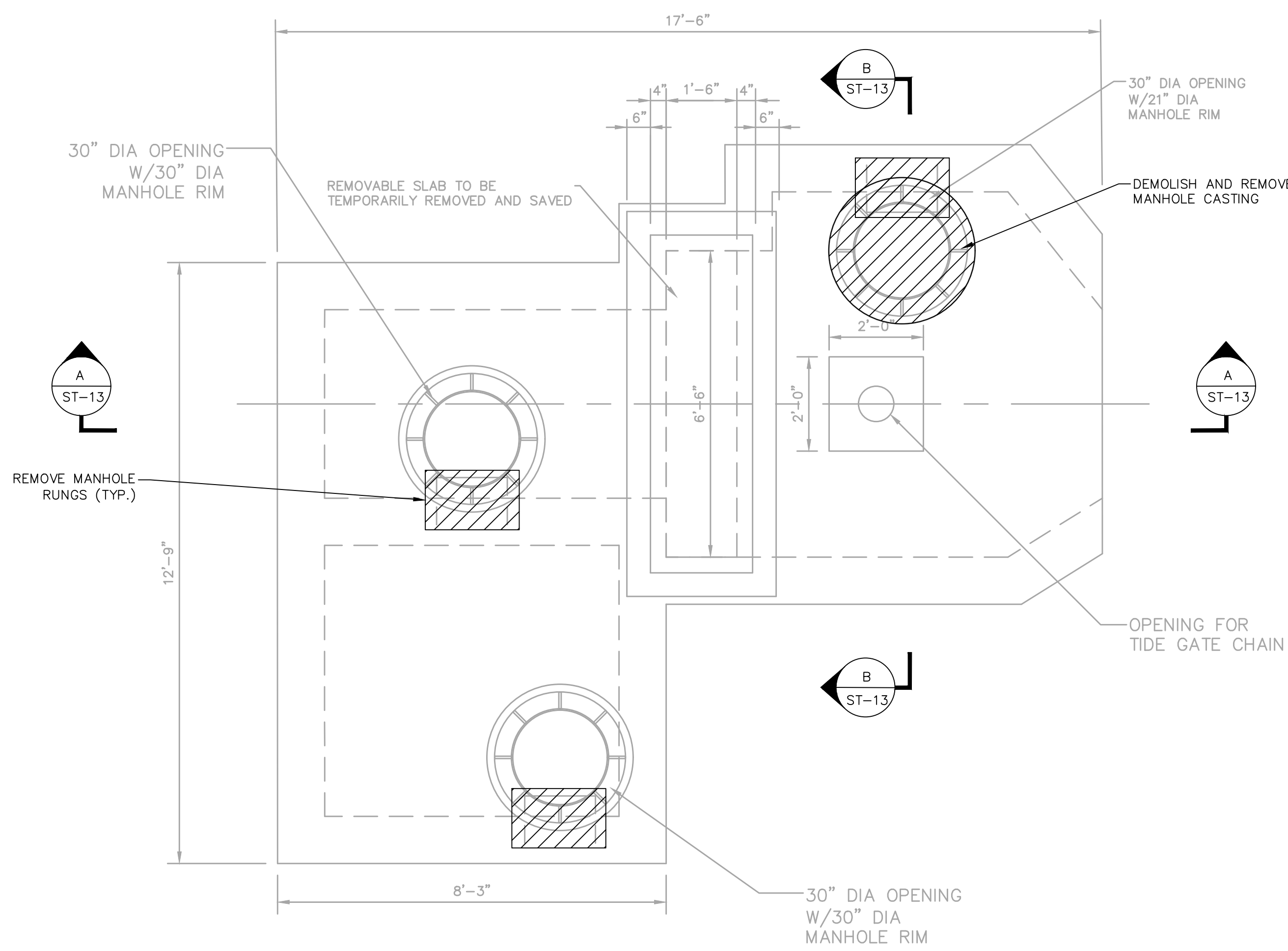
CITY OF PHILADELPHIA
WATER DEPARTMENT

SECTIONS $1/2" = 1'-0"$



WORK NO. S-40958-RD
SHEET NO. ST-12 OF 20 SHEETS

DRAWN BY	C. THOMPSON	08/26/2010
PROJECT ENGR.	J. CARUSO	08/26/2010
		09/05/2010
SUPERVISOR		DATE



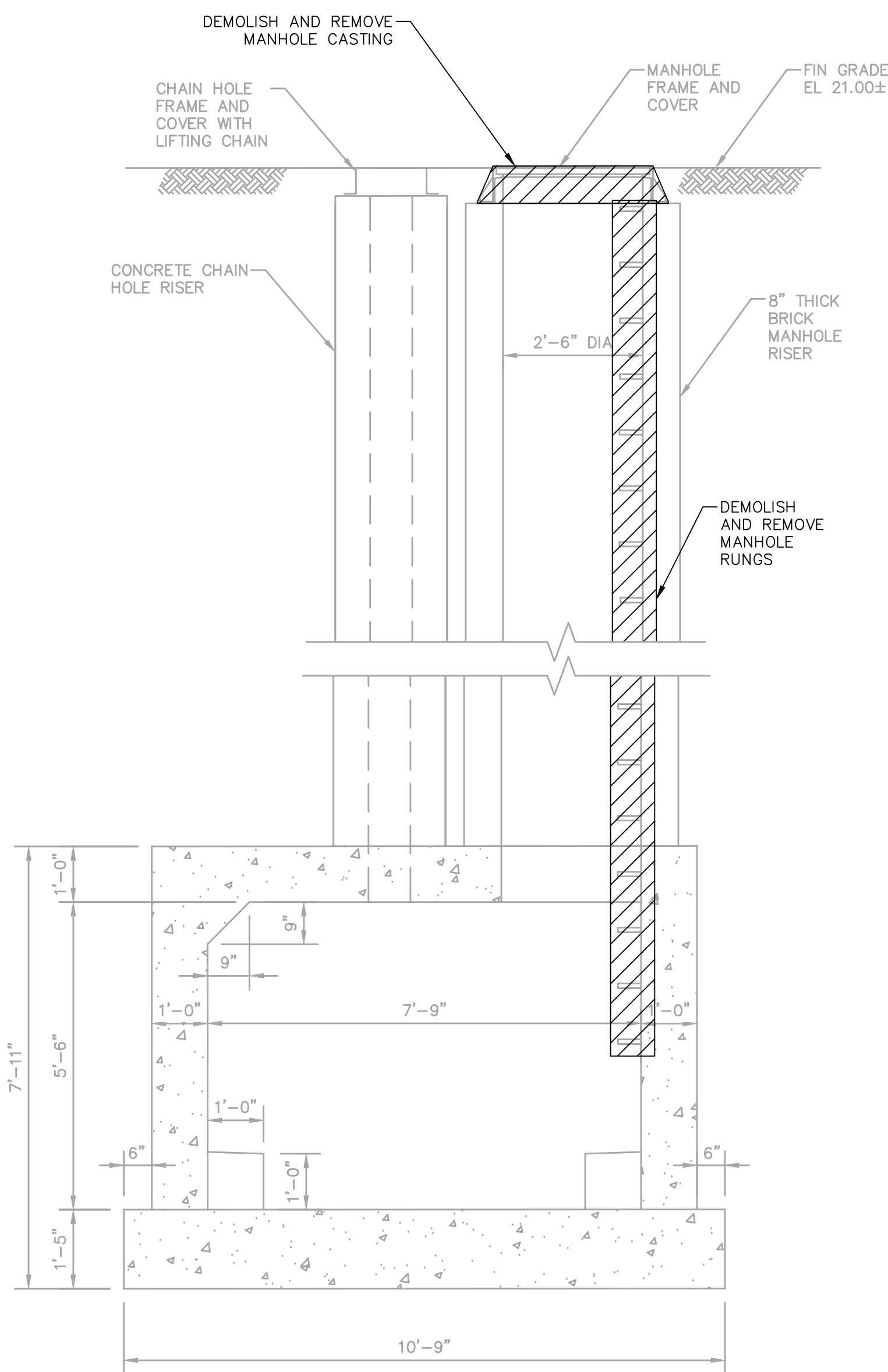
- NOTES:
1. FOR GENERAL AND STRUCTURAL NOTES, SEE DRAWING ST-19.
 2. COORDINATE REMOVAL EXTENT WITH NEW WORK SHOWN ON DRAWING ST-14.

LEGEND

 TO BE DEMOLISHED

DEMOLITION FOUNDATION PLAN
SCALE: 1/2" = 1'-0"

DEMOLITION ROOF PLAN
SCALE: 1/2" = 1'-0"



DEMOLITION SECTION A-A
SCALE: 1/2" = 1'-0"

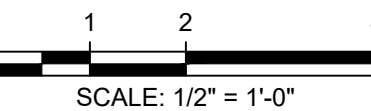
DEMOLITION SECTION B-B
SCALE: 1/2" = 1'-0"

SEWER RECONSTRUCTION PROJECT

NORTHERN LIBERTIES FLOOD RELIEF PROGRAM PHASE VI

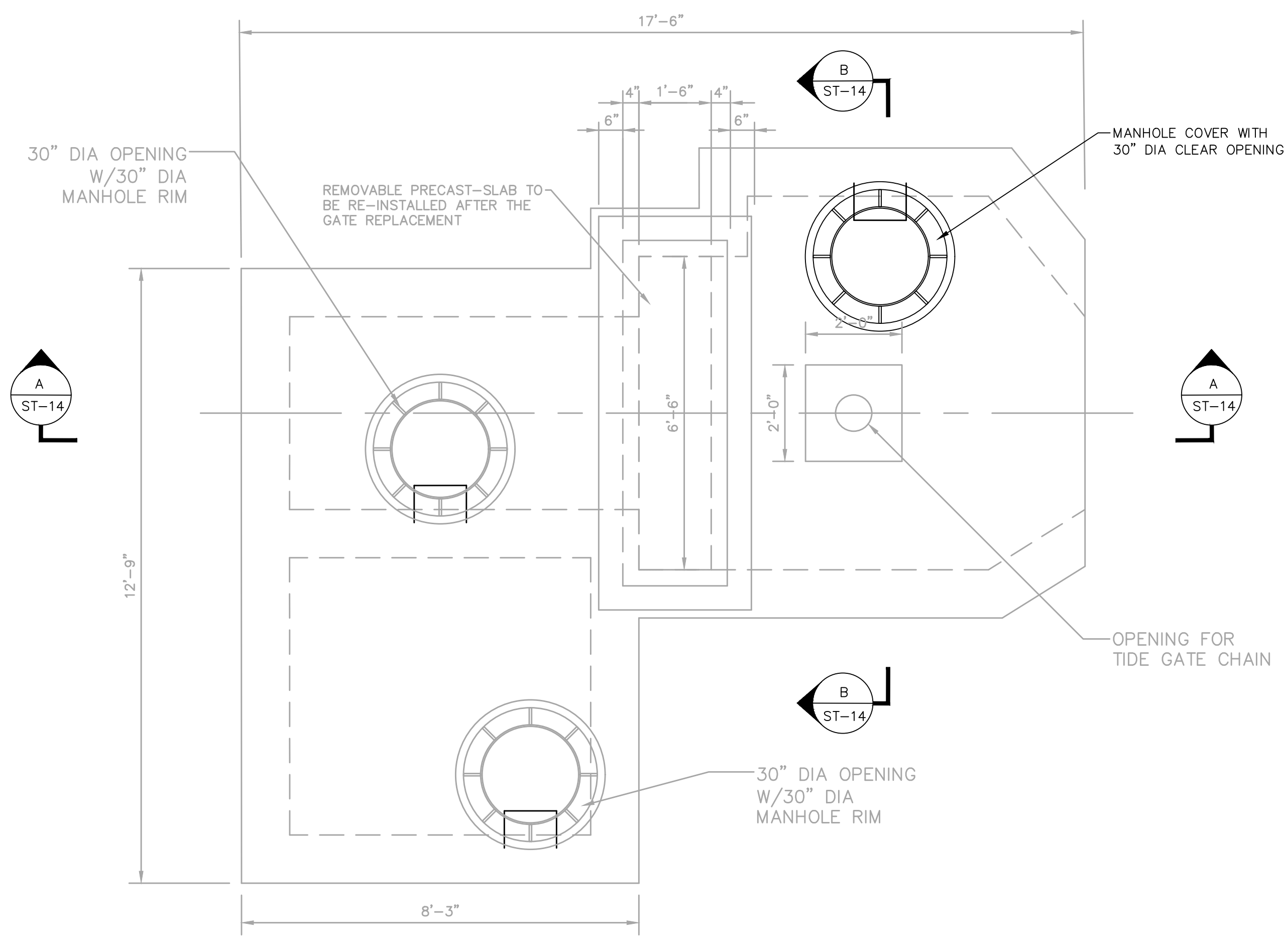
STRUCTURAL
RIVER FIELDS DRIVE
CHAMBER S-24 DEMOLITION PLANS AND SECTIONS

APPROVED  _____
MTT MACDONALD

CITY OF PHILADELPHIA
WATER DEPARTMENT
SCALES:

WORK NO. S-40958-RD
SHEET NO. ST-13 OF 20 SHEETS

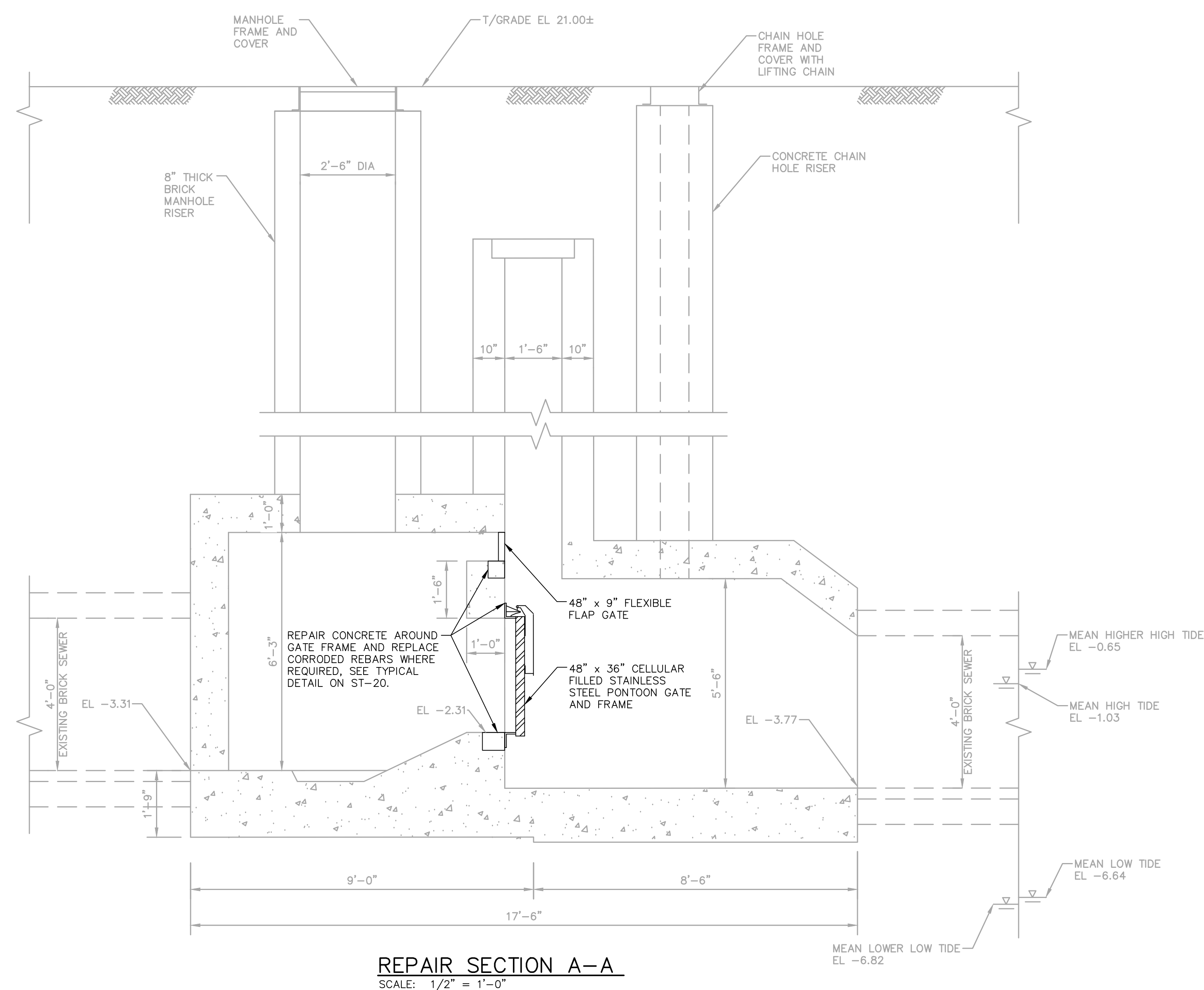
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PROJECT ENGR.	J. CARUSO	08/26/2
		09/04/202
SUPERVISOR		DATE



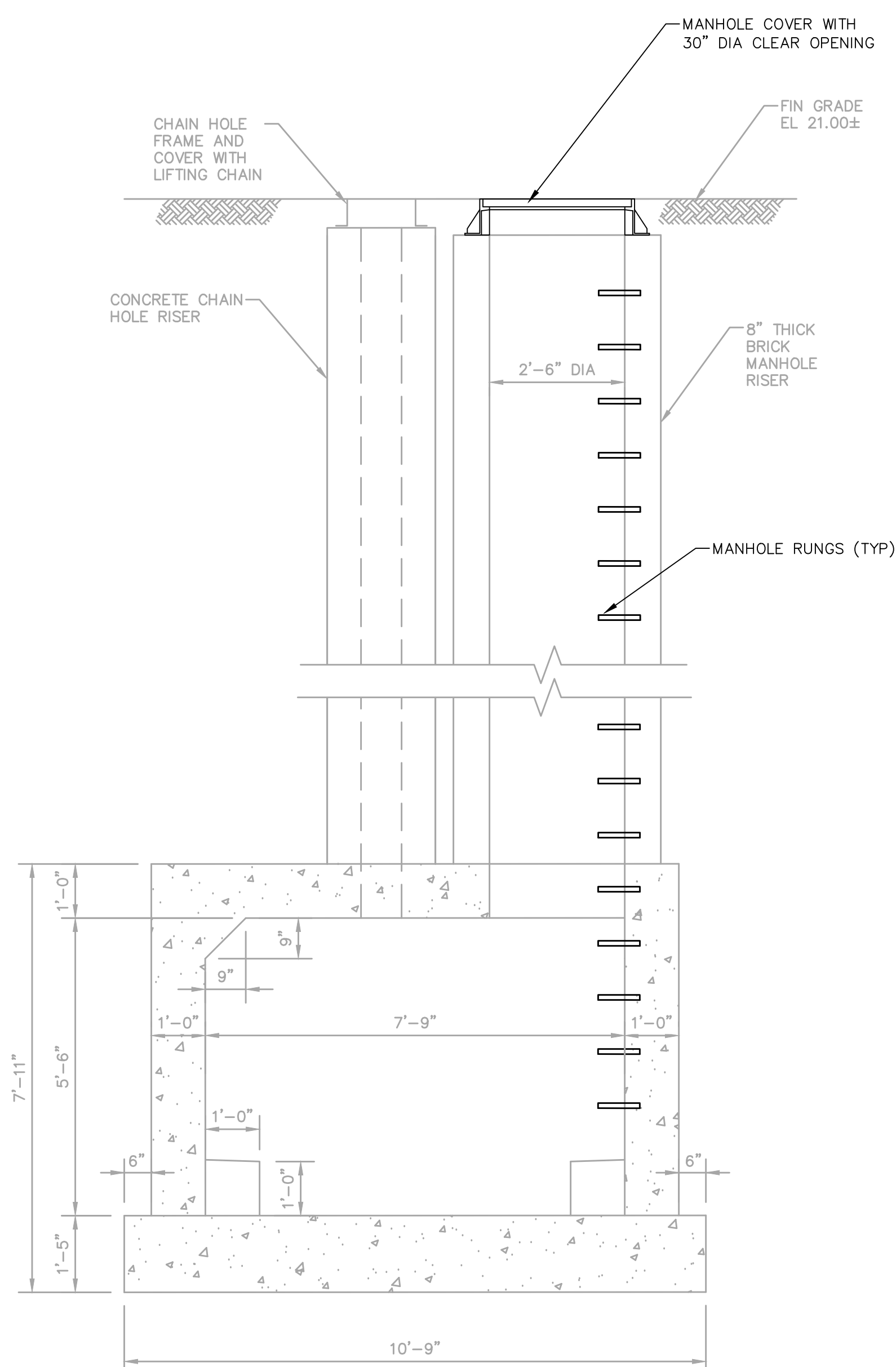
- NOTES:
1. FOR GENERAL AND STRUCTURAL NOTES, SEE DRAWING ST-19.
 2. PROVIDE AND INSTALL WATERSTOP AND SEALANT BETWEEN THE JOINTS OF THE REMOVABLE SLAB.

REPAIR FOUNDATION PLAN
SCALE: 1/2" = 1'-0"

REPAIR ROOF PLAN
SCALE: 1/2" = 1'-0"



REPAIR SECTION B-B
SCALE: 1/2" = 1'-0"



SEWER RECONSTRUCTION PROJECT

NORTHERN LIBERTIES FLOOD RELIEF PROGRAM PHASE VI

STRUCTURAL
RIVER FIELDS DRIVE
CHAMBER S-24 REPAIR PLANS AND SECTIONS

APPROVED MTT Macdonald
MTT MACDONALD

CITY OF PHILADELPHIA
WATER DEPARTMENT

SCALES:

SECTIONS $1/2" = 1'-0"$



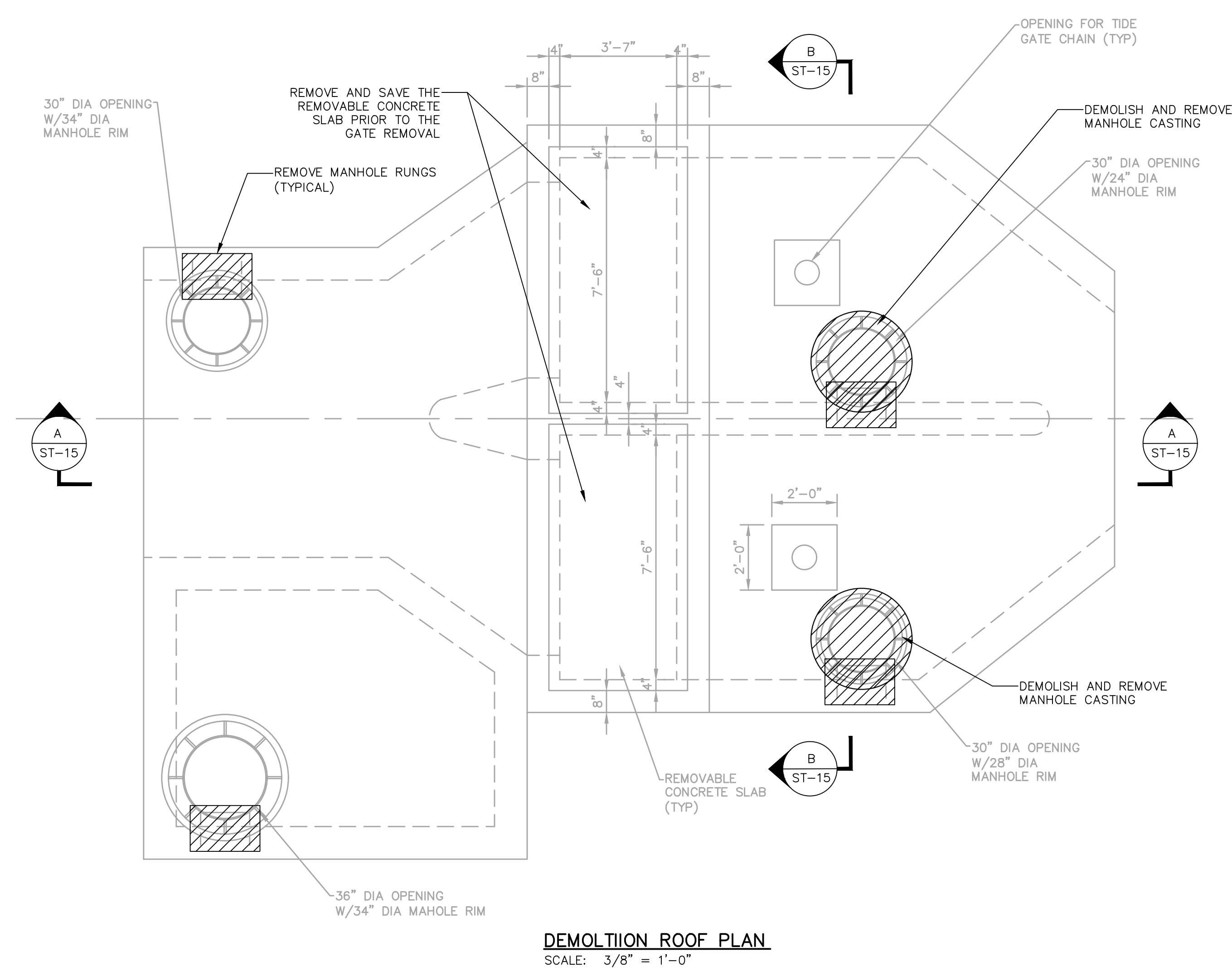
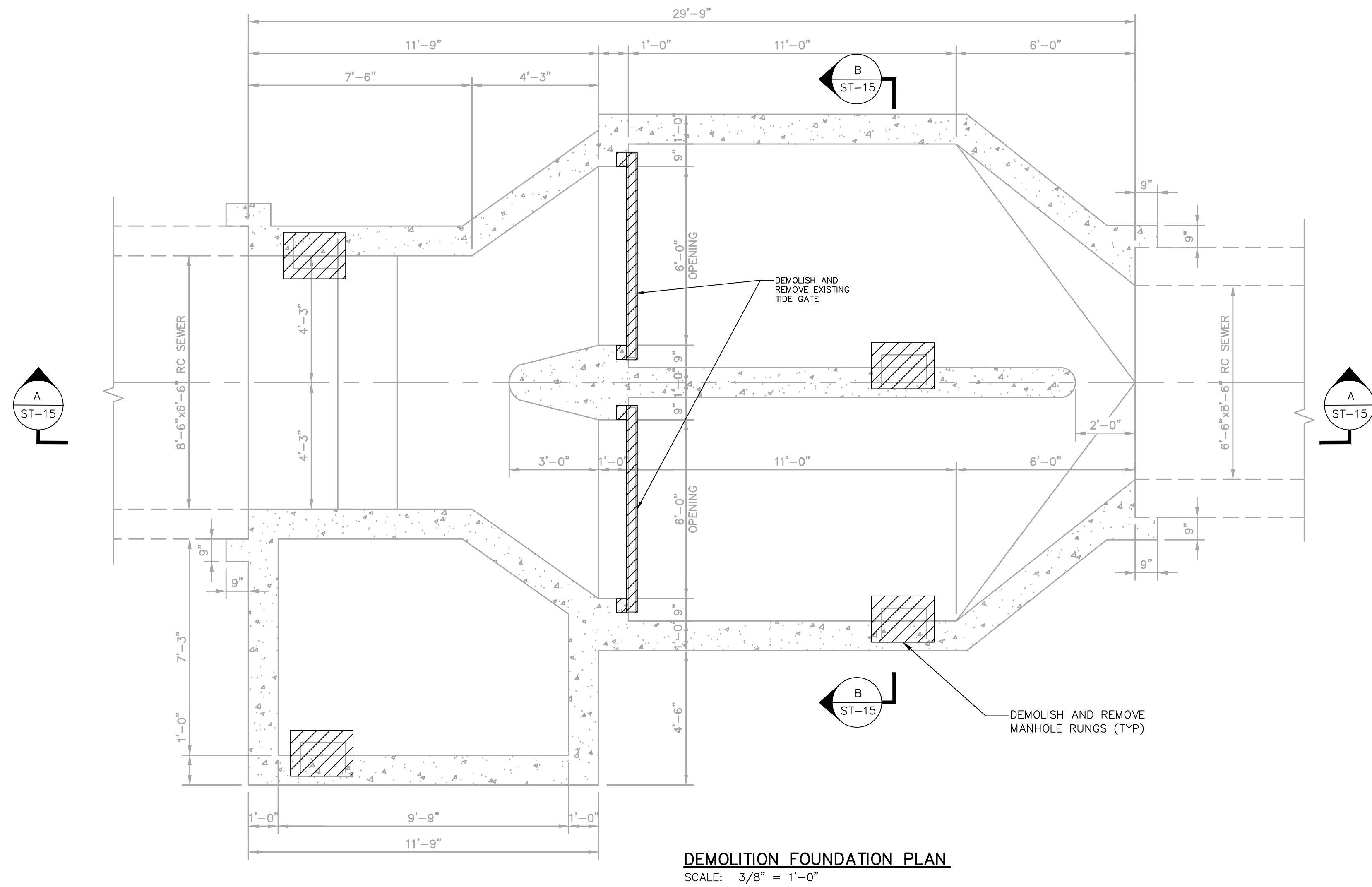
0 1 2 4

SCALE: $1/2" = 1'-0"$

WORK NO. S-40958-RD
SHEET NO. ST-14 OF 20 SHEETS

DRAWN BY	C. THOMPSON	08/26/24
PROJECT ENGR.	J. CARUSO	08/26/24
		09/05/24
SUPERVISOR		DATE

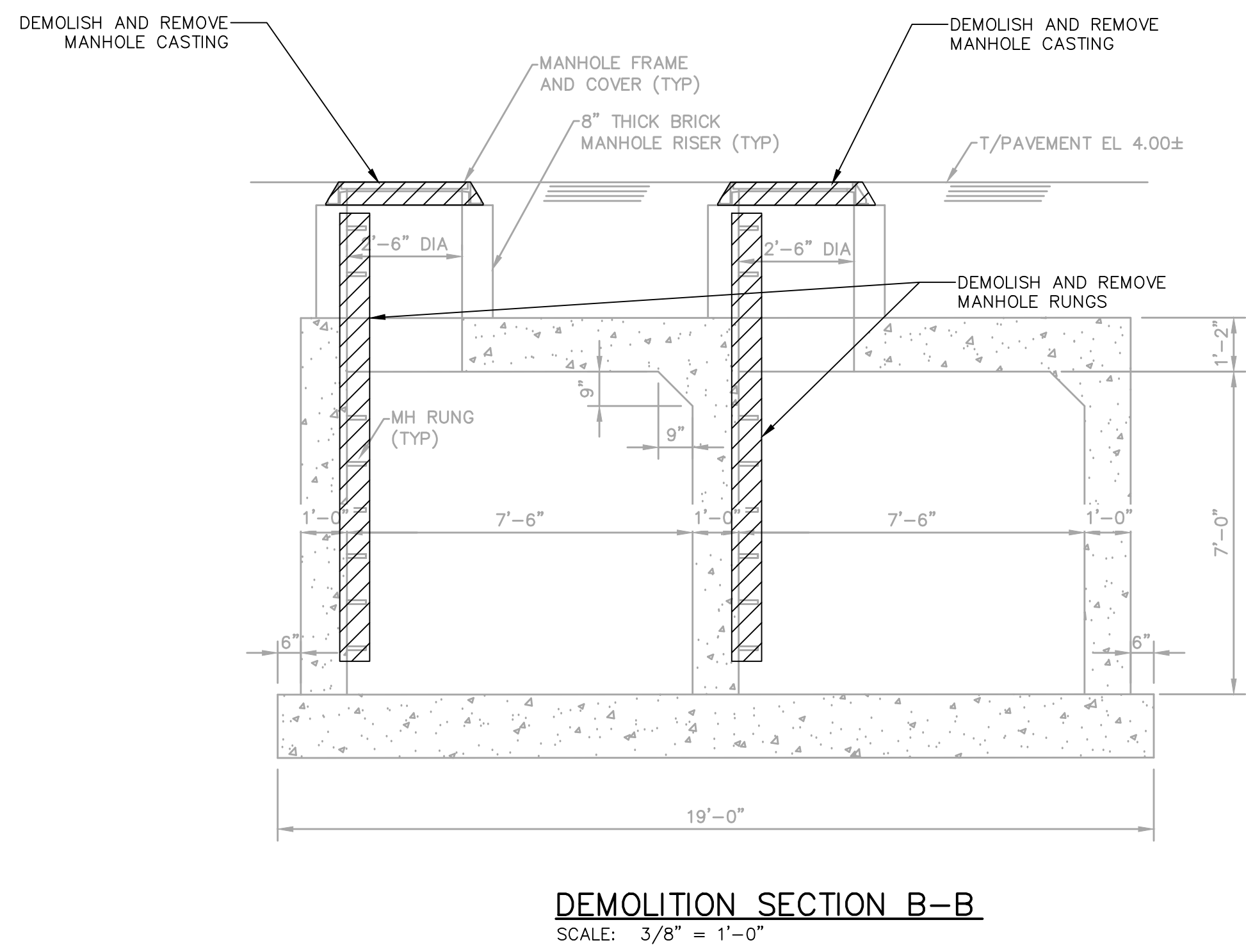
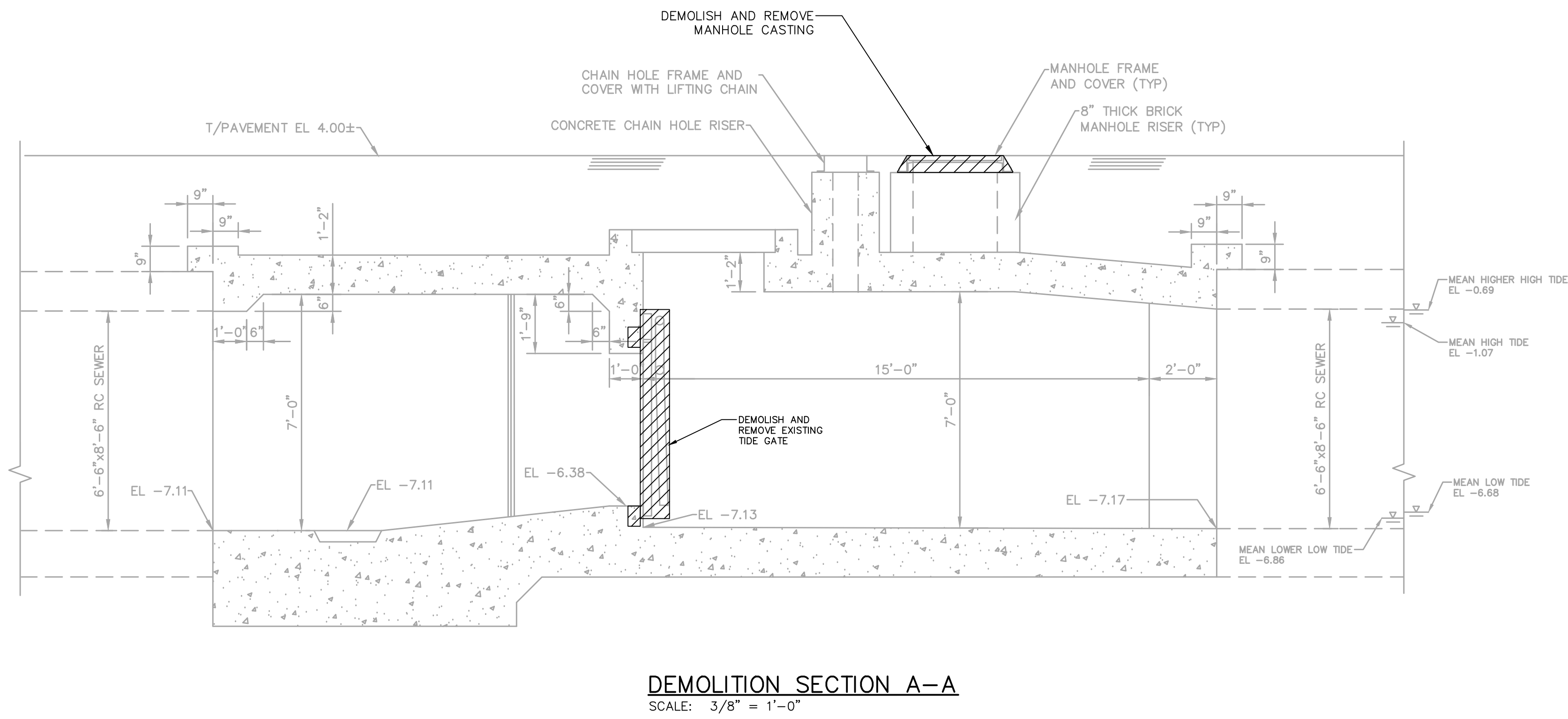
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- NOTES:
1. FOR GENERAL AND STRUCTURAL NOTES, SEE DRAWING ST-19.
 2. COORDINATE REMOVAL EXTENT WITH NEW WORK SHOWN ON DRAWING ST-16.

LEGEND

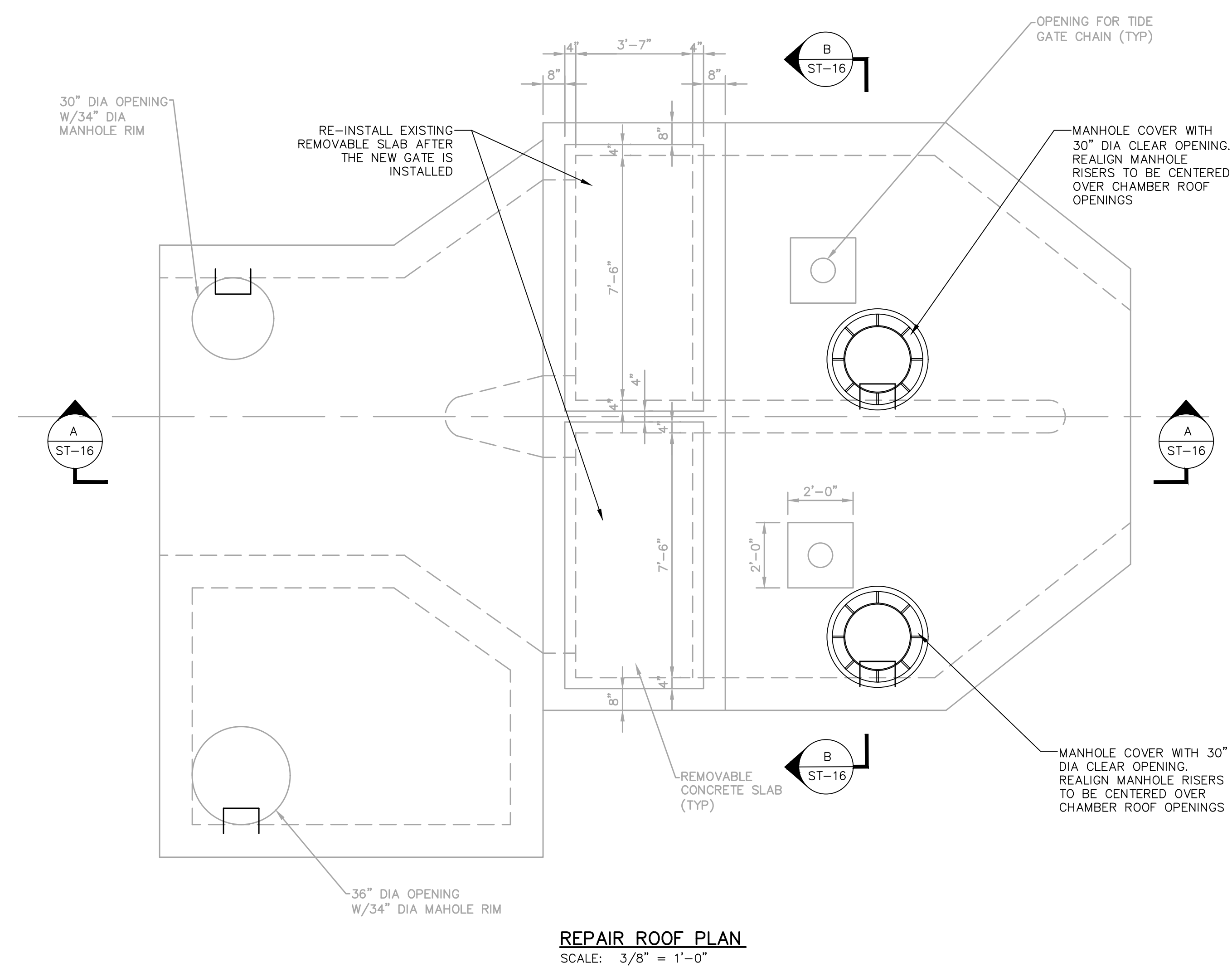
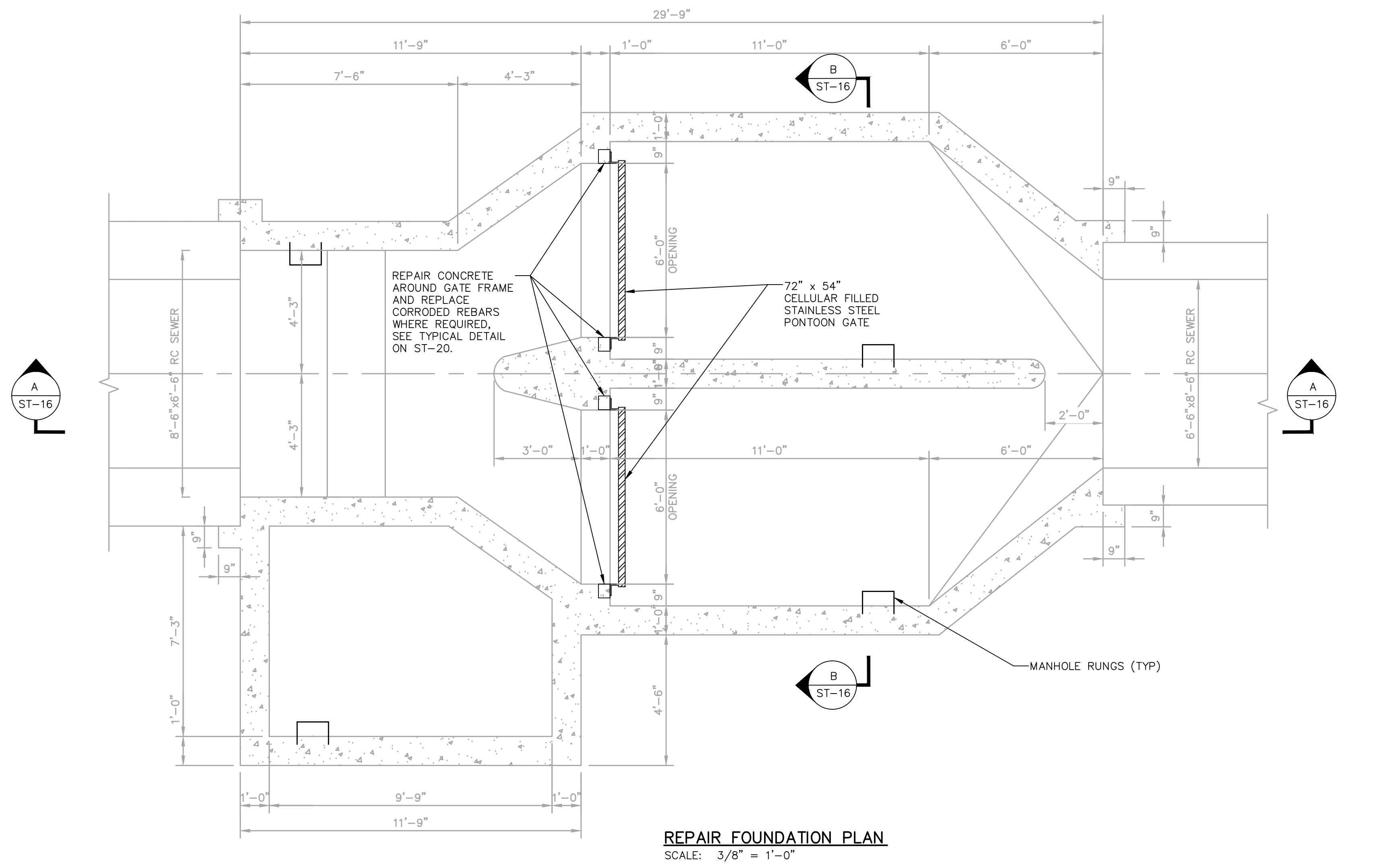
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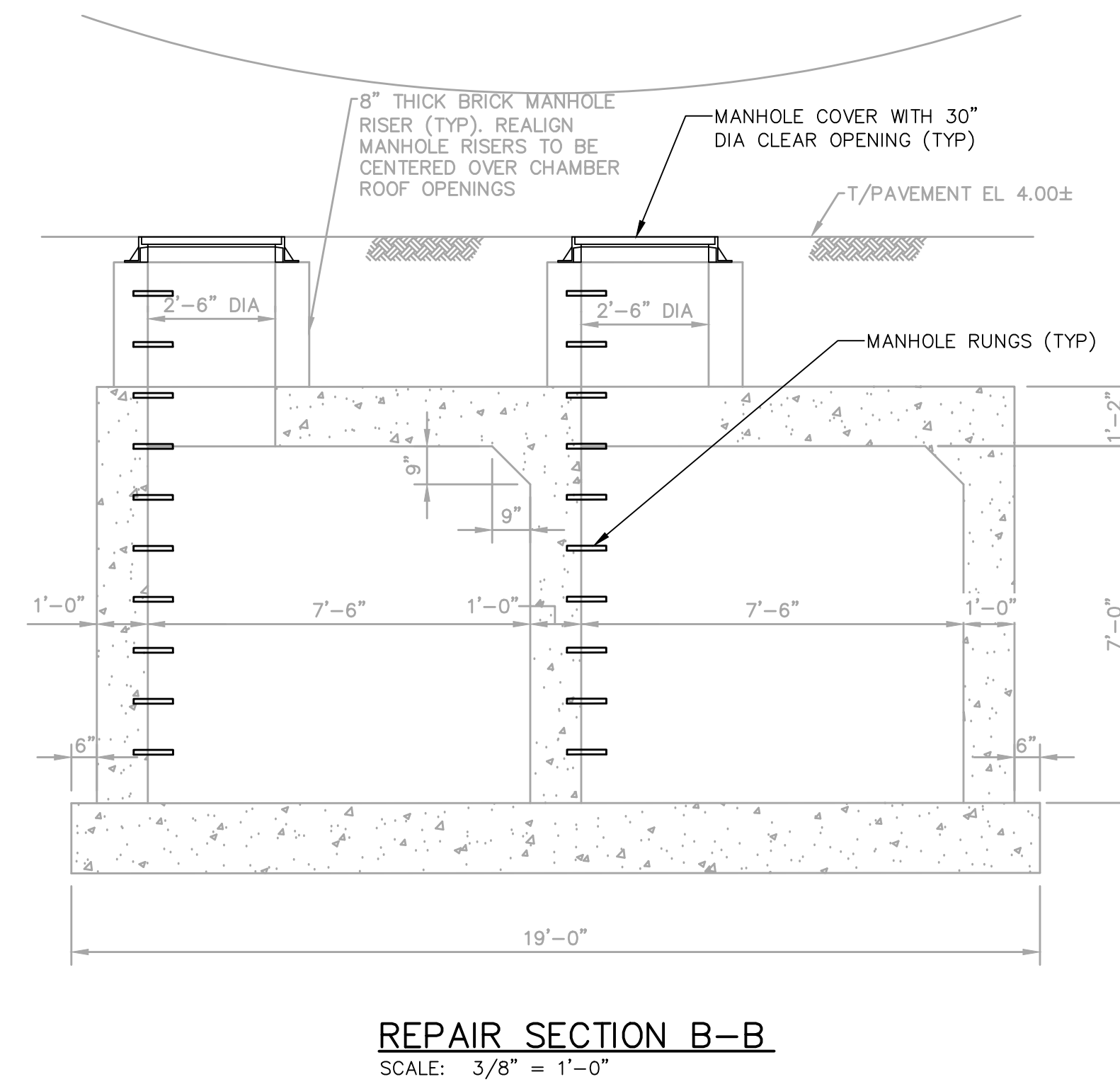
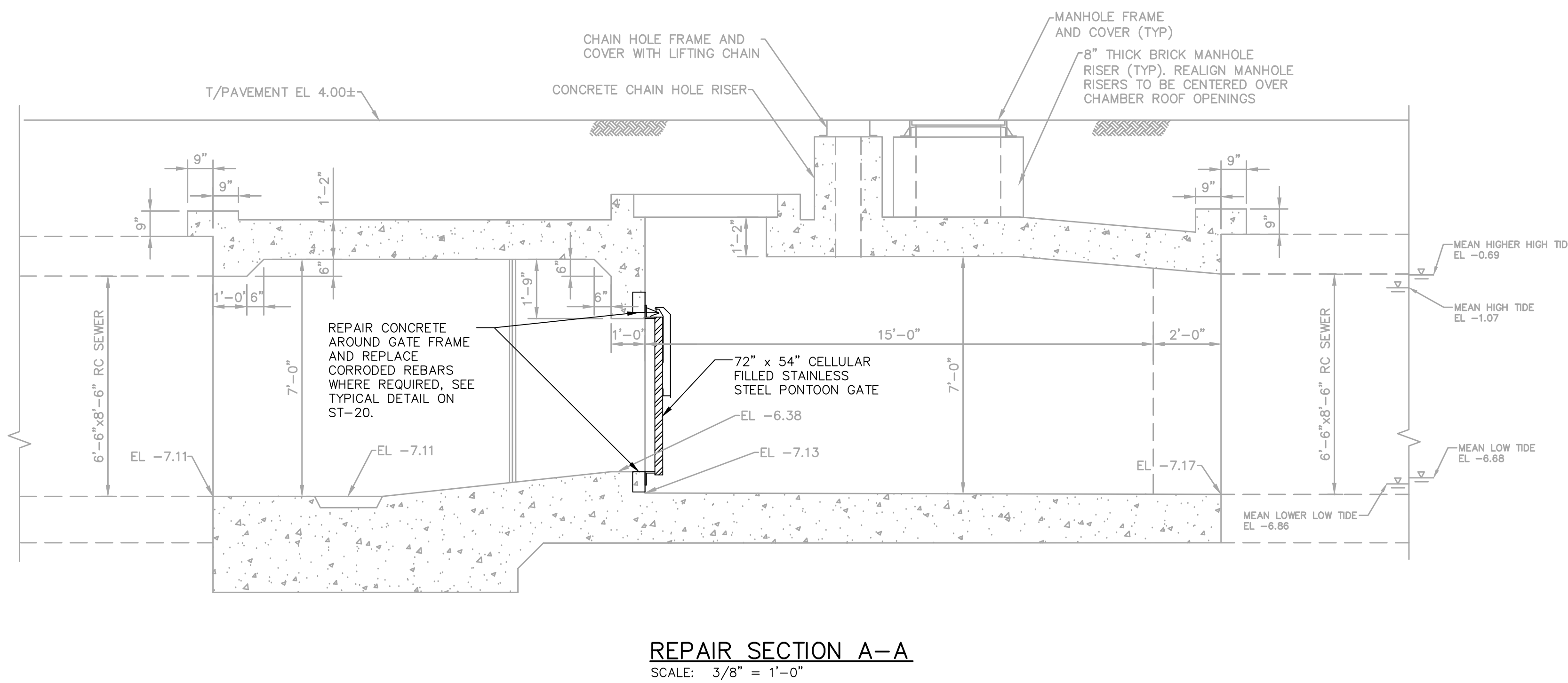
SEWER RECONSTRUCTION PROJECT

PHILADELPHIA WATER —DEPARTMENT— PLAN PREPARED FOR THE CITY OF PHILADELPHIA WATER DEPARTMENT BY:	NORTHERN LIBERTIES FLOOD RELIEF PROGRAM PHASE VI STRUCTURAL SOUTH 56TH STREET CHAMBER S-38 DEMOLITION PLANS AND SECTIONS												
MOTT MACDONALD JOSEPH L. CARUSO REGISTERED PROFESSIONAL ENGINEER No. PE081524 PENNSYLVANIA 09/04/2026	APPROVED CITY OF PHILADELPHIA WATER DEPARTMENT SCALES: SECTIONS 3/8" = 1'-0" 0 2 4 6 SCALE: 3/8" = 1'-0" WORK NO. S-40958-RD SHEET NO. ST-15 OF 20 SHEETS <table><tr><td>DRAWN BY</td><td>C. THOMPSON</td><td>08/26/24</td></tr><tr><td>PROJECT ENGR.</td><td>J. CARUSO</td><td>08/26/24</td></tr><tr><td>SUPERVISOR</td><td></td><td>09/04/2026</td></tr><tr><td>DATE</td><td></td><td></td></tr></table>	DRAWN BY	C. THOMPSON	08/26/24	PROJECT ENGR.	J. CARUSO	08/26/24	SUPERVISOR		09/04/2026	DATE		
DRAWN BY	C. THOMPSON	08/26/24											
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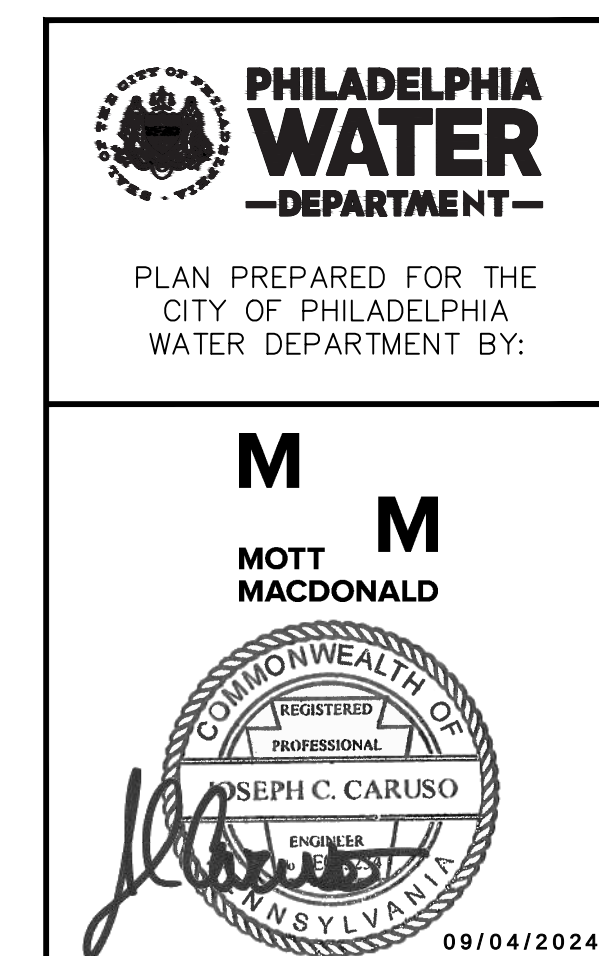
- NOTES:
- FOR GENERAL AND STRUCTURAL NOTES, SEE DRAWING ST-19.
 - PROVIDE AND INSTALL WATERSTOP AND SEALANT BETWEEN THE JOINTS OF THE REMOVABLE SLAB.



SEWER RECONSTRUCTION PROJECT

NORTHERN LIBERTIES FLOOD RELIEF PROGRAM PHASE VI

STRUCTURAL
SOUTH 56TH STREET
CHAMBER S-38 REPAIR PLANS AND SECTIONS



APPROVED

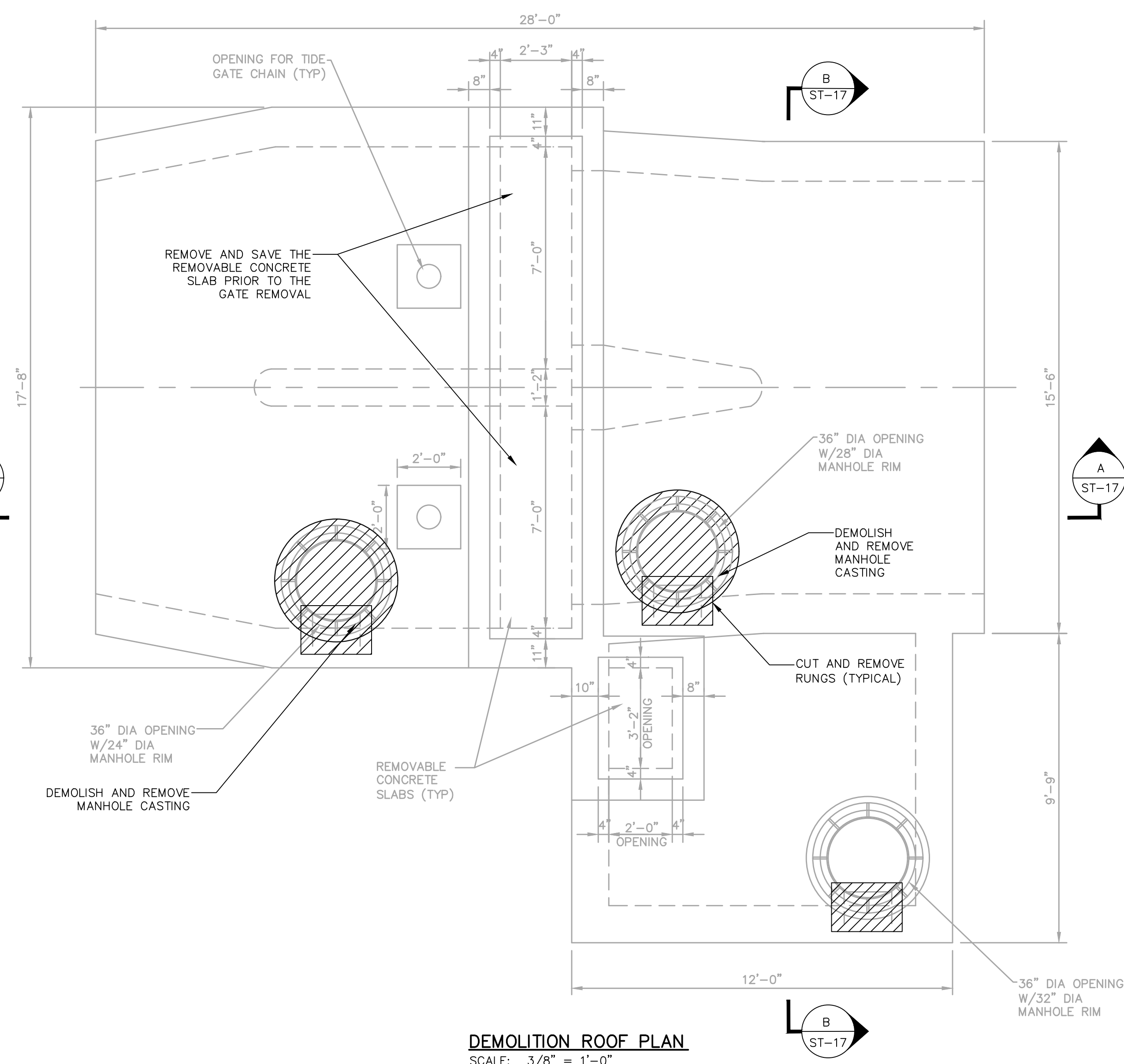
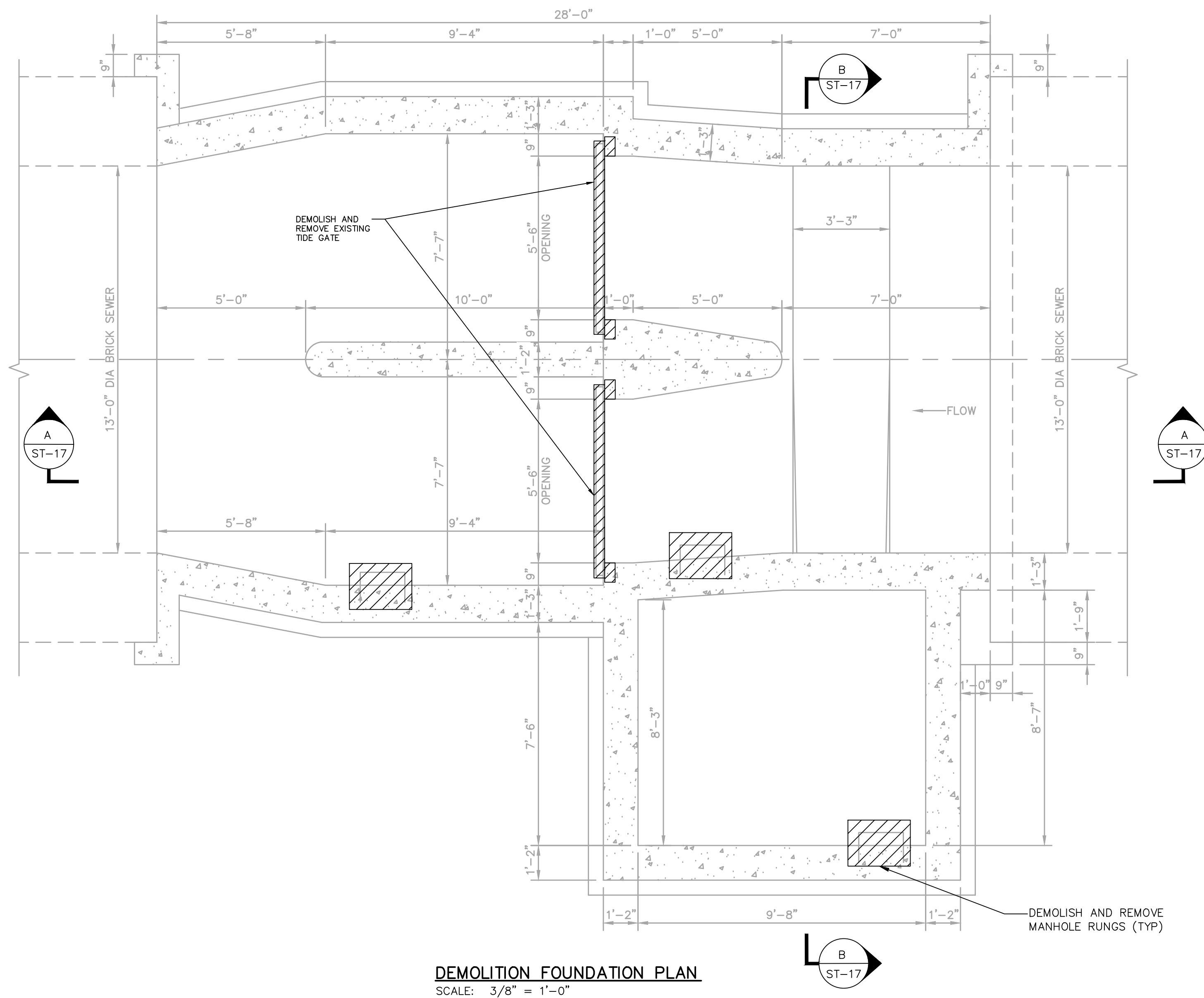
CITY OF PHILADELPHIA
WATER DEPARTMENT

SCALES:
SECTIONS 3/8" = 1'-0"
SCALE: 3/8" = 1'-0"

WORK NO. S-40958-RD
SHEET NO. ST-16 OF 20 SHEETS

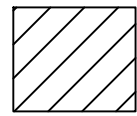
DRAWN BY	C. THOMPSON	08/26/24
PROJECT ENGR.	J. CARUSO	08/26/24
SUPERVISOR		DATE

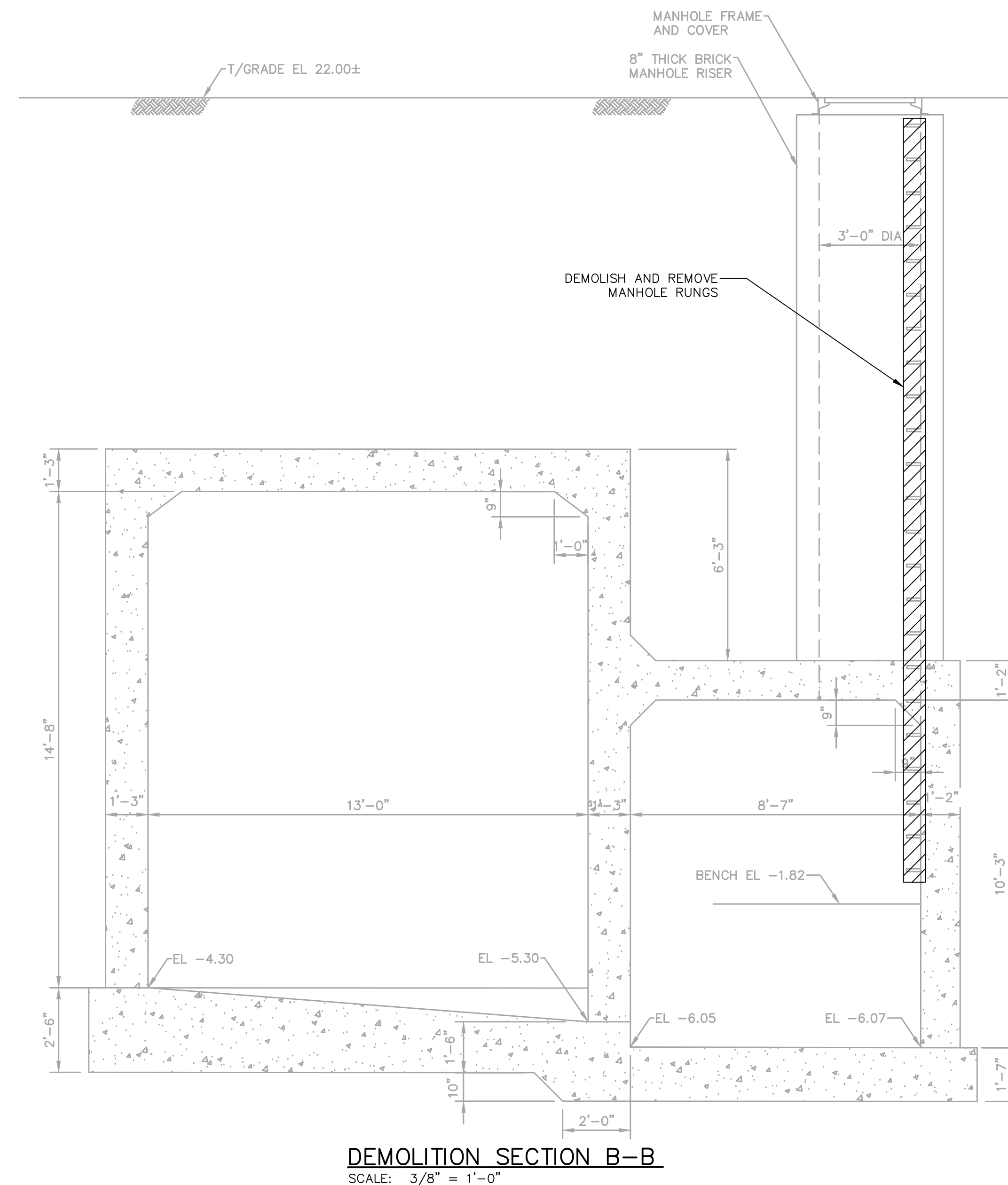
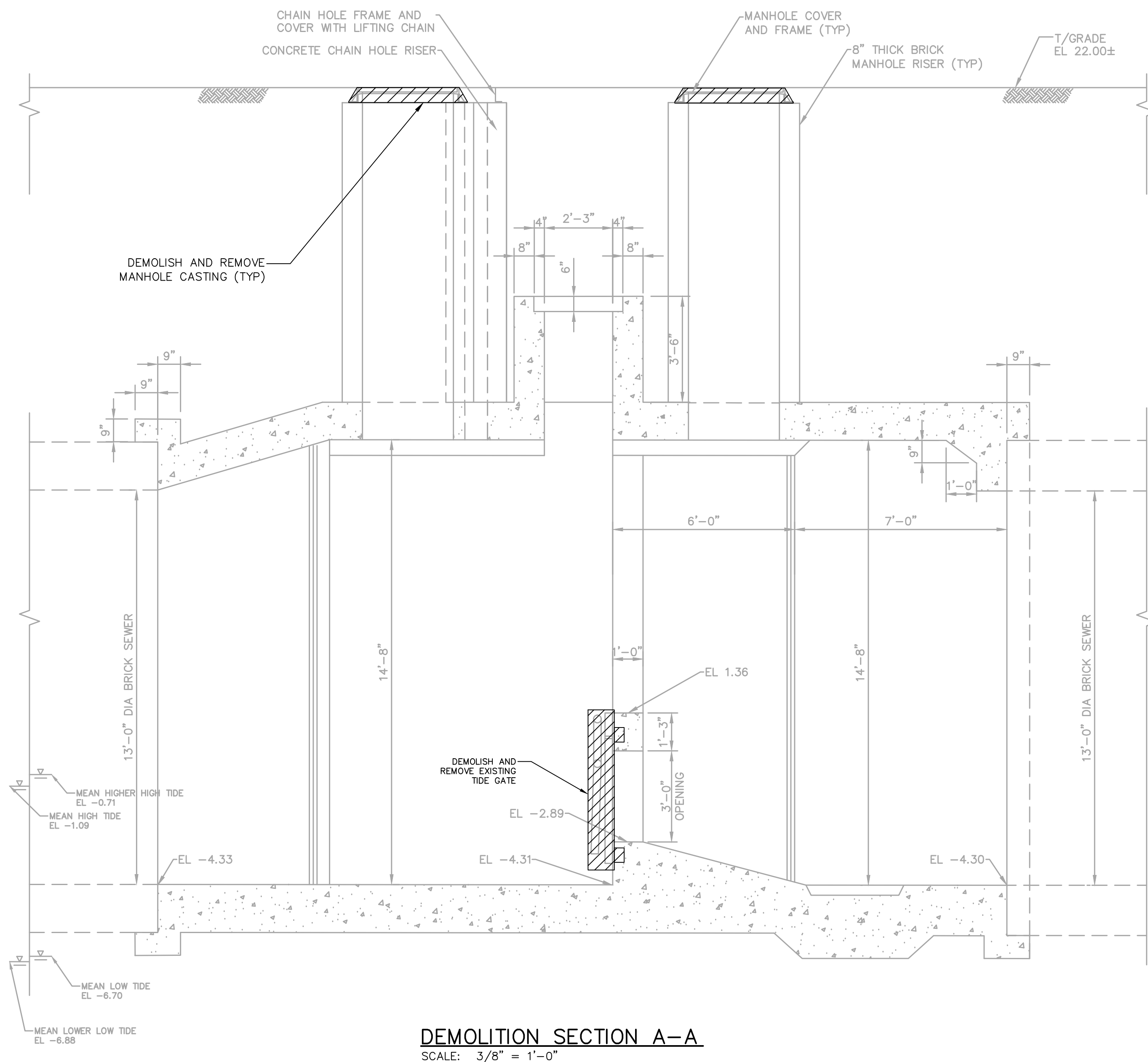
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- NOTES:
1. FOR GENERAL AND STRUCTURAL NOTES, SEE DRAWING ST-19.
 2. COORDINATE REMOVAL EXTENT WITH NEW WORK SHOWN ON DRAWING ST-18.
 3. THE CONTRACTOR IS ALERTED TO THE PRESENCE OF A GAS ODOR EMANATING FROM THE CHAMBER. THE CHAMBER SHALL BE SUFFICIENTLY VENTILATED PRIOR TO PERMITTING ACCESS BY ANY PERSONNEL.

LEGEND

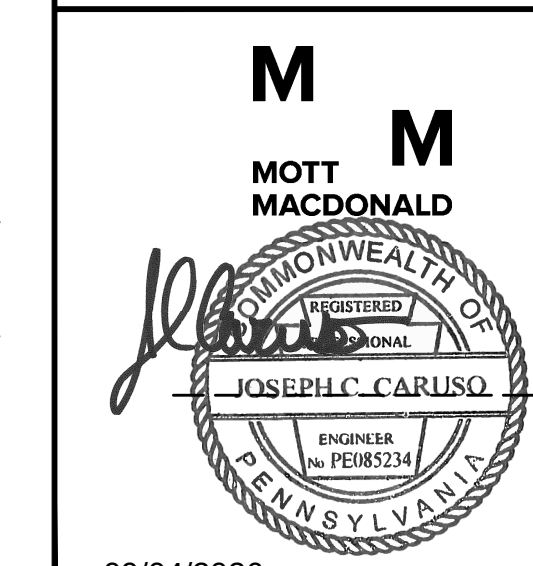
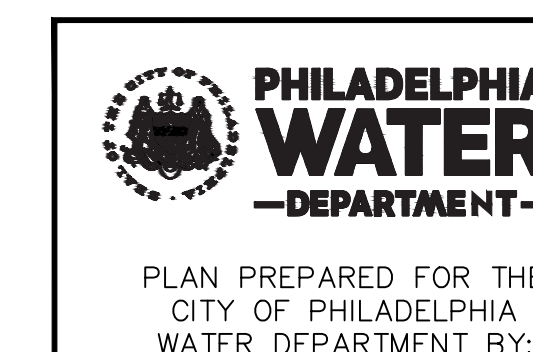
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SEWER RECONSTRUCTION PROJECT

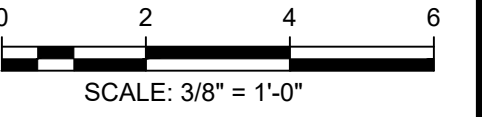
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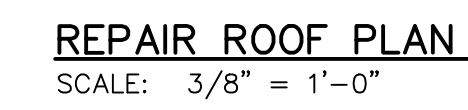
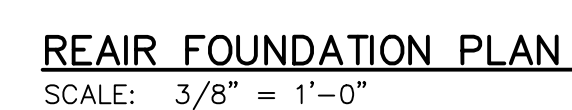
STRUCTURAL PASSYUNK AVENUE AND DOVER STREET CHAMBER S-42 DEMOLITION PLANS AND SECTIONS



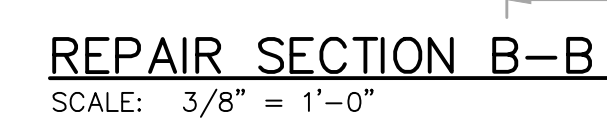
APPROVED 

WORK NO. S-40958-RD
SHEET NO. ST-17 OF 20 SHEETS

CITY OF PHILADELPHIA WATER DEPARTMENT			
SCALES:			
SECTIONS 3/8" = 1'-0"			
			
SCALE: 3/8" = 1'-0"			
DRAWN BY	C. THOMPSON	08/26/24	
PROJECT ENGR.	J. CARUSO	08/26/24	
SUPERVISOR		09/04/2026	
		DATE	



- REPAIR SECTION A-A
SCALE: $3/8" = 1'-0"$



DRAWN BY	C. THOMPSON	08/26/24
PROJECT. ENGR.	J. CARUSO	08/26/24
		09/05/24
SUPERVISOR		DATE

1. THE STRUCTURAL DESIGN OF THIS PROJECT IS BASED UPON APPROPRIATE PORTIONS OF THE FOLLOWING:

- A) 2018 PHILADELPHIA BUILDING CODE.
 - B) AMERICAN CONCRETE INSTITUTE BUILDING CODE REQUIREMENTS – FOR STRUCTURAL CONCRETE (ACI 318-14).
 - C) CODE REQUIREMENTS FOR ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES (ACI 350-06).
 - D) INTERNATIONAL BUILDING CODE (IBC), 2018.
 - E) STEEL CONSTRUCTION MANUAL, AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), 15TH EDITION.
 - F) THE AVERAGE TIDE ELEVATION SHOWN ON STRUCTURAL DRAWINGS ARE ESTIMATED FROM TIDE DATA COLLECTED FROM NOAA TIDAL GAUGE STATIONS
2. THE CONTRACTOR IS RESPONSIBLE FOR AND SHALL VERIFY AND COORDINATE ALL DIMENSIONS AND DETAILS CONCERNING HIS WORK BEFORE PROCEEDING WITH SAID WORK. ANY DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER. THE CONTRACTOR SHALL VERIFY THE ELEVATIONS OF THE EXISTING STRUCTURES AND CLEARANCES TO NEW CONSTRUCTION.
 3. DETAILS SHOWN IN ANY SECTION APPLY TO ALL SIMILAR SECTIONS UNLESS OTHERWISE NOTED.
 4. THE CONTRACTOR SHALL FULLY BRACE AND OTHERWISE PROTECT HIS WORK IN PROGRESS UNTIL THE STRUCTURE IS COMPLETED.
 5. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND LOCATE ALL EXISTING UNDERGROUND UTILITIES AND LINES AS NEEDED BEFORE COMMENCING CONSTRUCTION.
 6. THE CONTRACTOR SHALL PROVIDE, INSTALL, AND MAINTAIN A COMPLETE SYSTEM FOR DEWATERING THE CONSTRUCTION SITE AS REQUIRED TO PROPERLY CONSTRUCT ALL STRUCTURES IN THE DRY. SUCH PROCEDURES SHALL AVOID DISTURBANCE OF THE SOIL STRUCTURE.
 7. THE CONTRACTOR SHALL FULLY BRACE AND OTHERWISE PROTECT THE WORK IN PROGRESS UNTIL THE STRUCTURE IS COMPLETED AND SAFE TO REMOVE BRACING.
 8. REFER TO THE PROJECT SPECIFICATIONS FOR COMPLETE INFORMATION. WHERE ANY DISCREPANCY IS DETERMINED BETWEEN THESE NOTES AND THE SPECIFICATIONS, THE MORE STRINGENT SHALL APPLY.
 9. REFER TO "PMD TIDE GATE REPLACEMENT STUDY", PREPARED BY MOTT MACDONALD, DATED 05/21/2020 FOR ADDITIONAL INFORMATION ABOUT EACH REGULATING CHAMBER.
 10. THE TIDE ELEVATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE AND SUBJECT TO VARIATION. ALL WORK SHALL BE COMPLETED IN THE DRY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAKE INDEPENDENT TIDE MEASUREMENTS FOR THE PURPOSE OF SIZING TEMPORARY DAMMING.

1. DRAWINGS ARE BASED OFF HISTORIC DRAWING FILES PROVIDED BY THE PHILADELPHIA WATER DEPARTMENT, WITH MINOR ADJUSTMENTS BASED ON A LIMITED FIELD CONDITION ASSESSMENT. THE CONTRACTOR SHALL FIELD VERIFY AND COORDINATE ALL FIELD CONDITIONS, DIMENSIONS, LOCATIONS, ELEVATIONS, MATERIALS, AND DETAILS SHOWN ON THE CONTRACT DRAWINGS BEFORE DEMOLITION.
2. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF THE SHORING, PRIOR TO DEMOLITION. THE SHORING DESIGN SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF PHILADELPHIA.
3. REFER TO THE SEWER DRAWINGS FOR ADDITIONAL INFORMATION NOT SHOWN.
4. ALL STEEL BEAMS AND CONNECTIONS SHALL BE HOT DIP GALVANIZED.
5. MANHOLE RUNGS SHALL BE COPOLYMER POLYPROPYLENE PLASTIC WITH GRADE 60 STEEL REINFORCEMENT, PATTERN PS12-PF-DF, BY M.A. INDUSTRIES, INC. OR APPROVED EQUIV. RUNGS SHALL BE PLACED 12-INCHES ON CENTER. FOR INSTALLATION SEE MANUFACTURER'S INSTRUCTIONS.
6. CELLULAR FILLED STAINLESS STEEL PONTOON GATES SHALL BE CUSTOM MADE TO ENSURE THE FRAMES OF THE NEW TIDE GATE CONNECT TO THE EXISTING TIDE GATE EMBEDDED FRAME AND WALL THIMBLE WHERE THE THIMBLE OR FRAME ARE IN GOOD CONDITIONS. THE CONTRACTOR SHALL FIELD VERIFY THE EXISTING TIDE GATE OPENING SIZE, FRAME SIZE, AND BOLT LOCATIONS/PATTERN AND COORDINATE WITH THE GATE MANUFACTURER TO FABRICATE A SUITABLE TIDE GATE. REFER TO SPECIFICATIONS AND SEWER DRAWINGS FOR ADDITIONAL INFORMATION.
7. THE CONTRACTOR SHALL REPAIR ALL CRACKS AND DETERIORATED CONCRETE IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS. REFER TO REPAIR DEFECTIVE CONCRETE SURFACES AND CRACKS DETAILS ON DRAWINGS ST-20 AND THE CONCRETE REPAIR SPECIFICATION, SECTION 03700.
8. WHERE BACKFILL CANNOT BE SUFFICIENTLY COMPACTED AROUND STRUCTURES, CLSM SHALL BE PROVIDED.
9. NEW MANHOLE COVER AND FRAMES SHALL MAINTAIN A 30" DIAMETER CLEAR OPENING.

1. REINFORCED CAST-IN-PLACE CONCRETE CONSTRUCTION SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

1. ALL STRUCTURES SHALL CONFORM TO ACI 318-14, "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" AND ACI 350-06 "CODE REQUIREMENTS FOR ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES."
- 1.2 ALL STRUCTURES SHALL CONFORM TO ACI PUBLICATION SP 66--(04), "ACI DETAILING MANUAL", EXCEPT A SPECIFICALLY MODIFIED BY THE CONTRACT DRAWINGS AND THE SPECIFICATIONS.
2. ALL CONCRETE USED ON THE PROJECT SHALL HAVE A SPECIFIED 28-DAY COMPRESSIVE STRENGTH (f'_c) AS NOTED BELOW. SUCH STRENGTHS SHALL BE DETERMINED BY A TESTING LABORATORY. FOR FURTHER REQUIREMENTS, SEE THE SPECIFICATIONS.
 - 2.1. $f'_c = 4,500$ PSI. CONCRETE HAVING THIS SPECIFIED COMPRESSIVE STRENGTH SHALL BE USED FOR ALL REINFORCED CONCRETE WORK, EQUIPMENT BASES, FILL AND IN GENERAL THROUGHOUT THE PROJECT UNLESS NOTED OTHERWISE ON THE CONTRACT DRAWINGS.
 - 2.2. $f'_c = 2,500$ PSI. CONCRETE HAVING THIS SPECIFIED COMPRESSIVE STRENGTH SHALL BE USED FOR NON-REINFORCED WORK SUCH AS SETTING SLABS AND AS MAY OTHERWISE BE REQUIRED BY CONDITIONS ENCOUNTERED DURING THE PROGRESS OF THE PROJECT.
3. ALL CONCRETE, REGARDLESS OF SPECIFIED DESIGN STRENGTH, SHALL CONTAIN STONE OR GRAVEL AGGREGATE SUCH THAT THE WEIGHT OF THE HARDENED CONCRETE IS 145 POUNDS PER CUBIC FOOT (+3%).
4. FOR AIR ENTRAINMENT REQUIREMENTS SEE THE SPECIFICATIONS.
5. ALL REINFORCING STEEL SHALL HAVE A MINIMUM YIELD STRENGTH, $F_y = 60$ KSI AND SHALL BE NEW DEFORMED BILLET-STEEL CONFORMING TO ASTM A615-04a, GRADE 60.
6. ALL DETAILING, BENDING, PLACEMENT, AND SUPPORT OF REINFORCING SHALL CONFORM TO THE STANDARDS CITED IN NOTE 1 EXCEPT AS MODIFIED BY THE CONTRACT DRAWINGS.
7. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL OF THE STANDARD AND SPECIAL ACCESSORIES FOR SUPPORTING, HOLDING, AND TYING REINFORCEMENT ADEQUATELY IN ITS PROPER POSITION. THIS WILL INCLUDE SUPPORT BARS OF INDIVIDUAL HIGH CHAIRS FOR TOP REINFORCEMENT AND SCHEDULE BARS FOR BOTTOM REINFORCING AND WINDING A REINFORCING IN PLACE. THE CONTRACTOR SHALL DESIGN AND DETAIL SPECIAL SUPPORTS AS REQUIRED AND SUBMIT DETAILS AND LAYOUTS FOR REVIEW BY THE ENGINEER.
8. INDIVIDUAL HIGH CHAIRS FOR TOP REINFORCEMENT SHALL BE PROVIDED WITH LEGS CROSSED, LACED AND WELDED, FOR SLABS OVER 12" THICK. THEY SHALL BE DESIGNED TO ADEQUATELY SUPPORT CONSTRUCTION LOADS AND BE SUBMITTED FOR REVIEW BY THE ENGINEER.
9. ALL REINFORCING STEEL BARS SHALL BE SPLICED AT ALL LAP POINTS, BENT AS REQUIRED, AND DEVELOPED AS PER THE TYPICAL DETAILS AND SCHEDULES. CONTINUOUS TOP REINFORCING SHALL BE SPLICED MIDWAY BETWEEN SUPPORTS AND CONTINUOUS BOTTOM REINFORCING AT THE SUPPORTS UNLESS OTHERWISE SHOWN ON DRAWINGS.
10. CLEAR CONCRETE COVER OVER PRINCIPLE REINFORCING SHALL BE AS CALLED FOR IN THE TYPICAL DETAILS AND OTHERWISE SHOWN ON THE CONTRACT DRAWINGS.
11. ALL WELDED WIRE REINFORCEMENT (WWR) SHALL CONFORM TO ASTM A1064.
12. THE CONTRACTOR SHALL COORDINATE PLACEMENT OF ALL PIPE SLEEVES OR BOX OUT AND FOR ALL EMBEDDED ITEMS WITH THE VARIOUS DISCIPLINES AS NOTED OR AS REQUIRED TO PERFORM THE WORK.
13. ALL HOLES, CUTS, OR OPENINGS, 12" OR LARGER IN SLABS REQUIRE THE CONSENT OF THE ENGINEER UNLESS THEY ARE SHOWN ON THE CONTRACT DRAWINGS.
14. METAL CAST INTO CONCRETE SHALL HAVE ANCHOR STRAPS OF MINIMUM DIMENSIONS 2" x 1/2" x 1'-0" HOOKED 2" WELDED THERE TO. STRAPS SHALL BE SPACED AT 24" O.C. MAXIMUM, UNLESS OTHERWISE NOTED.
15. ALL STRUCTURAL MEMBERS SHALL BE CAST MONOLITHICALLY FOR THEIR FULL DEPTH, UNLESS OTHERWISE NOTED.
16. ALL CONSTRUCTION JOINTS SHALL BE THOROUGHLY CLEANED, WETTED, AND SLUSHED WITH CEMENT GROUT JUST PRIOR TO PLACING NEW CONCRETE.
17. ALL EXPOSED CONCRETE EDGES SHALL BE ROUND TO A 3/4" RADIUS OR CHAMFERED AS PER THE CONTRACT DRAWINGS.
18. AT OPENINGS IN CONCRETE WALLS (UNLESS OTHERWISE NOTED) PROVIDE ADDITIONAL REINFORCEMENT AS PER TYPICAL DETAILS FOR WALL OPENINGS.
19. THE CONTRACTOR SHALL ADJUST THE SHORING USING SURVEYING INSTRUMENTS PRIOR TO PLACING, AND IMMEDIATELY AFTER PLACING OF CONCRETE FOR FORMED BEAMS AND SLABS. ANY ADJUSTMENTS SHALL NOT BE PERMITTED AFTER THE INITIAL SET OF THE CONCRETE. ALL FLOOR SLAB AND BEAM FORMS SHALL BE CAMBERED TO COMPENSATE FOR ANTICIPATED DEFLECTIONS IN THE FORMWORK PRIOR TO HARDENING OF THE CONCRETE, AND DEFLECTION OF SLABS AND BEAMS AFTER REMOVAL OF SHORES.
20. THE SPACING OF REINFORCING SHOWN ON THE CONTRACT DRAWINGS IS THE MAXIMUM PERMITTED. IT MAY BE REDUCED FOR CONSTRUCTION CONSIDERATIONS BUT IS NOT TO BE EXCEEDED.
21. PROVIDE AND MAINTAIN ADEQUATE SHORING UNTIL THE STRUCTURE HAS BEEN COMPLETED AND CONCRETE HAS ACHIEVED FINAL STRENGTH.
 - 21.1. WHEN CASTING NEW CONCRETE AGAINST EXISTING CONCRETE, EXISTING CONCRETE SURFACES SHALL BE ROUGHENED TO PROVIDE A CONCRETE SURFACE PROFILE. THE CONTRACTOR SHALL PERFORM NON-DESTRUCTIVE TESTING TO LOCATE EXISTING STRUCTURAL REINFORCEMENT THAT WILL NOT BE OUT DURING INSTALLATION. ANY INTERFERENCES THAT MAY AFFECT NEW WORK SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR RESOLUTION.
22. MUST BE STRUCTURALLY SOUND AND FREE OF OIL, GREASE, DUST, COATINGS, ETCETERA. CONTRACTOR SHALL REPAIR EXISTING CRACKS IN ACCORDANCE TO THE ACI 224.1R-07 RECOMMENDATIONS. APPLY SIKKA ARMATEC 110 EPODEM BONDING AGENT OR APPROVED EQUAL, UNLESS NOTED OTHERWISE.
23. WHEN INSTALLING FILL DRILLED EPOXY ADHESIVE ANCHORING SYSTEMS OR CORE DRILLING EXISTING STRUCTURAL SLABS, COLUMNS, OR WALL, CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING STRUCTURE. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING STRUCTURE.

1. FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AISC "MANUAL OF STEEL CONSTRUCTION", 15TH EDITION.
2. STRUCTURAL STEEL SHALL CONFORM TO ASTM A6 STANDARD SPECIFICATION FOR GENERAL REQUIREMENTS FOR ROLLED STRUCTURAL STEEL BARS, PLATES, SHAPES AND STEEL PIPES COVERED BY THE FOLLOWING SPECIFICATIONS:

ROLLED STRUCTURAL STEEL WIDE FLANGE SHAPES:	ASTM A992	$F_y = 50 \text{ KSI}$	$F_u = 65 \text{ KSI}$
MISCELLANEOUS SHAPES INCLUDING ANGLES, CHANNELS, PLATES, ETCETERA:	ASTM A36	$F_y = 36 \text{ KSI}$	$F_u = 58 \text{ KSI}$
HOLLOW STRUCTURAL SECTIONS:	ASTM A500		

3. UNLESS OTHERWISE NOTED, ALL BOLTS SHALL BE 3/4" INCH DIAMETER A325 AND SHALL BE USED IN BEARING TYPE CONNECTIONS. ALL HIGH STRENGTH BOLTS SHALL MEET THE REQUIREMENTS OF THE "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS". ALL ASTM A325 BOLTS WITH NUTS AND WASHERS SHALL BE GALVANIZED. ALL ASTM A490 BOLTS WITH NUTS AND WASHERS SHALL BE COATED WITH A ZINC/ALUMINUM CORROSION PROTECTIVE COATING.
4. ALL STRUCTURAL STEEL SHALL BE HOT-DIP GALVANIZED, UNLESS OTHERWISE NOTED, ON THE DESIGN DRAWINGS.
5. ALL STEEL SURFACES TO BE GALVANIZED SHALL BE PREPARED IN ACCORDANCE WITH SSPC-598 "PICKLING", IMMEDIATELY PRIOR TO GALVANIZING.
6. GALVANIZED ITEMS SHALL BE ZINC-COATED BY THE HOT-DIP METHOD IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS: ASTM A123, A143, A353, A354, A355, A356, FIELD TOUCH-UP ANY GALVANIZING DAMAGED BY WELDING OR OTHER FIELD ACTIVITY USING COLD GALVANIZING PAINT.
7. SHOP AND FIELD WELDING SHALL CONFORM TO REQUIREMENTS OF THE AWS D1.1 "STRUCTURAL WELDING CODE", LATEST EDITION.

1. THE SCOPE OF THIS WORK IS ONLY FOR DEMOLITION OF THE STRUCTURAL COMPONENTS. THE CONTRACTOR SHALL COORDINATE DEMOLITION DRAWINGS WITH OTHER DISCIPLINES DEMOLITION DRAWINGS AND NEW CONSTRUCTION.
2. THE EXACT CONFIGURATION AND DIMENSIONS OF THE EXISTING CONSTRUCTION AS DESCRIBED BY THESE DRAWINGS SHALL BE VERIFIED BY THE GENERAL CONTRACTOR AND HIS SUBCONTRACTORS, AND ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER PRIOR TO SUBMITTING A BID AND THE COMMENCEMENT OF ANY DEMOLITION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL EXISTING PIPING, DUCTS, CONDUIT, ETC.
3. ALL DEMOLITION AND REMOVALS SHALL BE COORDINATED WITH EACH TRADE TO ENSURE THE CONTINUITY OF ALL SERVICES TO THE FACILITY. THE CONTRACTOR SHALL COORDINATE DEMOLITION WORK WITH NEW CONSTRUCTION DRAWINGS TO ENSURE THAT NO ITEMS OR SERVICES WHICH ARE TO REMAIN ARE DISTURBED.
4. THE CONTRACTOR SHALL SUBMIT INFORMATIONAL REPORT THAT INDICATES THE MEASURES PROPOSED FOR PROTECTING INDIVIDUALS AND PROPERTY FOR ENVIRONMENTAL PROTECTION AND DUST CONTROL. INDICATE PROPOSED LOCATIONS AND CONSTRUCTION OF BARRIERS. THE CONTRACTOR SHALL DETAIL SPECIFIC MEASURES PROPOSED TO PROTECT ADJACENT CONSTRUCTION TO REMAIN INCLUDING MEANS OF EGRESS FROM THE BUILDING.
5. THE CONTRACTOR SHALL SCHEDULE DETAILED SEQUENCE OF DEMOLITION WORK, WITH STARTING AND ENDING DATES FOR EACH ACTIVITY, TEMPORARY INTERRUPTION OF UTILITY SERVICES AND SHUTOFF AND CAPPING OF UTILITY SERVICES.
6. THE CONTRACTOR SHALL LOCATE, IDENTIFY, DISCONNECT, AND SEAL OR CAP OFF UTILITIES SERVING BUILDINGS AND STRUCTURES TO BE DEMOLISHED. IF REMOVAL, RELOCATION, OR ABANDONMENT OF UTILITY SERVICES WILL AFFECT ADJACENT BUILDINGS, THEN PROVIDE TEMPORARY UTILITIES THAT BYPASS BUILDINGS AND STRUCTURES TO BE DEMOLISHED AND THAT MAINTAIN CONTINUITY OF SERVICE WITHIN THE BUILDING. PROVIDE AND MAINTAIN INTERIOR AND EXTERIOR SHORING, BRACING OR STRUCTURAL SUPPORT TO PRESERVE STABILITY AND PREVENT UNEXPECTED MOVEMENT OR COLLAPSE OF CONSTRUCTION BEING DEMOLISHED. STRENGTHEN OR ADD NEW SUPPORTS WHEN REQUIRED DURING PROGRESS OF DEMOLITION.
7. PROVIDE TEMPORARY BARRICADES AND OTHER PROTECTION REQUIRED TO PREVENT INJURY TO PEOPLE AND DAMAGE TO ADJACENT BUILDINGS AND FACILITIES TO REMAIN. PROVIDE PROTECTION TO ENSURE SAFE PASSAGE OF PEOPLE AROUND BUILDING DEMOLITION AREAS AND TO ADJACENT BUILDINGS AND FACILITIES TO REMAIN. PROVIDE PROTECTION TO EXPOSED BUILDING DEMOLITION OPERATIONS, AND OTHER ADJACENT EXTERIOR CONSTRUCTION THAT ARE TO REMAIN AND THAT ARE EXPOSED TO BUILDING DEMOLITION OPERATIONS.
8. THE CONTRACTOR SHALL DEMOLISH IDENTIFIED STRUCTURE PARTS BY METHODS REQUIRED TO COMPLETE THE WORK WITHIN LIMITATIONS OF GOVERNING REGULATIONS.
9. THE CONTRACTOR SHALL PERFORM SURVEYS TO DETECT HAZARDS THAT MAY RESULT FROM STRUCTURE DEMOLITION ACTIVITIES.
10. USE WATER MIST AND OTHER SUITABLE METHODS TO LIMIT SPREAD OF DUST AND DIRT. COMPLY WITH GOVERNING ENVIRONMENTAL PROTECTION REGULATIONS. DO NOT USE WATER WHEN IT MAY DAMAGE ADJACENT CONSTRUCTION OR CREATE HAZARDOUS OR OBJECTIONABLE CONDITIONS SUCH AS ICE, FLOODING, AND POLLUTION.
11. PROMPTLY REPAIR DAMAGE TO ADJACENT STRUCTURE CAUSED BY DEMOLITION OPERATIONS.
12. DO NOT ALLOW DEMOLISHED MATERIALS TO ACCUMULATE ON-SITE. REMOVE AND TRANSPORT DEBRIS IN A MANNER THAT WILL PREVENT SPILLAGE ON ADJACENT SURFACES AND AREAS. DO NOT BURN DEMOLISHED MATERIALS.
13. CLEAN ADJACENT STRUCTURES AND IMPROVEMENTS OF DUST, DIRT AND DEBRIS CAUSED BY DEMOLITION OPERATIONS. RETURN AND REPAIR IF DAMAGED ADJACENT AREAS TO CONDITION EXISTING BEFORE BUILDING DEMOLITION OPERATIONS BEGAN. CLEAN WORK AREAS OR ACCESS PATHS DAILY OF DEBRIS CAUSED BY DEBRIS TRANSPORT.
14. EXISTING SLAB REINFORCEMENT OR OTHER METALS EXPOSED AFTER DEMOLITION OF WALLS OR SLABS SHALL BE DRILLED AT A MINIMUM OF 1 1/2" WITH RESPECT TO THE CONCRETE SURFACE. AFTER DRILLING, CONTRACTOR SHALL APPLY SIKKA ARMATEC 110 EPOCROM BONDING AGENT AND INSTALL SIKATOP 121 PLUS SEALING MORTAR OR APPROVED EQUAL.
15. ALL COSTS TO CLEAN AND REPAIR ADJACENT STRUCTURES OR THE EXISTING IMPROVEMENTS OF THE SUBJECT FACILITY SCHEDULED TO REMAIN AS A RESULT OF THE CONTRACTOR'S DEMOLITION ACTIVITIES, SHALL BE PAID FOR BY THE CONTRACTOR, AND THE OWNER WILL NOT PAY OR COMPENSATE THE CONTRACTOR FOR ANY CLEANING AND/OR REPAIRING COSTS.
16. ALL DEMOLISHED/REMOVED MATERIAL SHALL BE DISPOSED OF AT AN APPROVED OFF-SITE LOCATION. CONTRACTOR SHALL PROVIDE CLEAN LEADIBLE WASTE DISPOSAL TICKETS, MANIFESTS, BILLS OF LADING, ETC. TO THE OWNER. CONTRACTOR SHALL ADHERE TO ALL ROADWAY WEIGHT RESTRICTION REQUIREMENTS ALONG THE HAULING ROUTE, AND COSTS FOR OFF-SITE DISPOSAL OF DEMOLISHED/REMOVED MATERIAL SHALL BE INCLUDED BY THE CONTRACTOR IN HIS BID PRICES.

1. THE CONTRACTOR SHALL PERFORM ALL EXCAVATION WORK WITH CAUTION SO AS NOT TO DAMAGE OR DISRUPT SERVICE OF EXISTING SEWERS, DUCTBANKS, WATER MAINS OR OTHER SUBSURFACE UTILITIES OR APPURTENANCES. ANY INTERFERENCE SHALL BE REPORTED TO THE ENGINEER.
2. EXISTING UNDERGROUND DUCTBANKS AND UTILITIES MAY OR MAY NOT BE SHOWN ON THE CONTRACT DRAWINGS. THE LOCATIONS OF EXISTING UTILITIES AS SHOWN ON THE CONTRACT DRAWINGS ARE NOT GUARANTEED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL EXISTING DUCTBANKS AND UTILITIES. THE CONTRACTOR SHALL MAINTAIN ALL UTILITY SERVICES IN OPERATION AND SHALL PROTECT THEM FROM DAMAGE DURING CONSTRUCTION.
3. WHEN EXCAVATING IN THE VICINITY OF EXISTING WATER MAINS, SANITARY SEWERS AND OTHER UNDERGROUND UTILITIES, THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION ONLY AND EXERCISE EXTREME CAUTION FOR PROTECTION OF THE EXISTING UTILITIES DURING CONSTRUCTION. "IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ERECTION PROCEDURE AND SEQUENCE TO INSURE THE SAFETY OF THE BUILDING AND ITS COMPONENT PARTS DURING ERECTION. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF WHATEVER TEMPORARY BRACING, GUIDES, OR TIE-DOWNS MAY BE NECESSARY."
4. UNLESS OTHERWISE NOTED PLACE STRUCTURAL BACKFILL IN 9" LIFTS AND COMPACT TO A MINIMUM OF 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY DETERMINABLE PER ASTM D1557. BACKFILLING AGAINST EXISTING AND NEW FOUNDATION WALLS SHALL BE DONE IN 6" LIFTS.

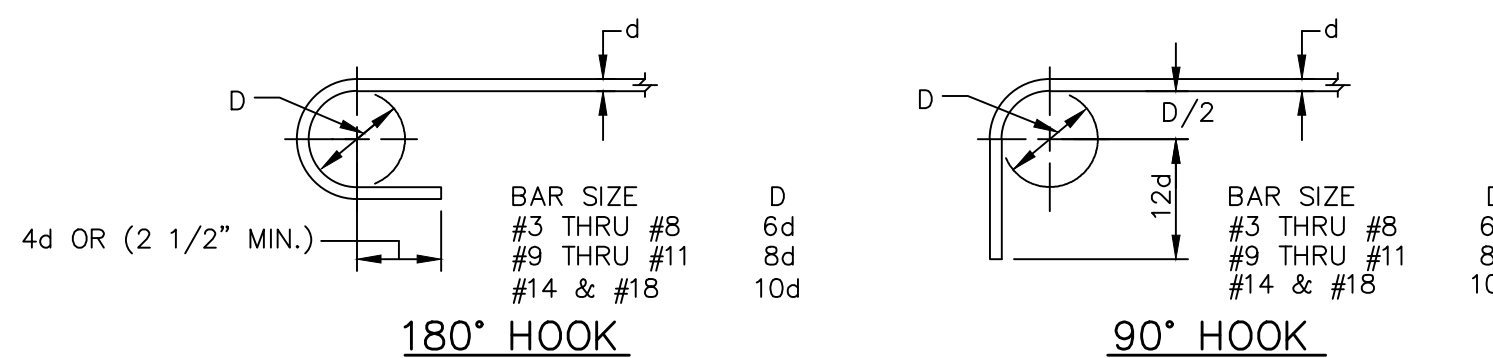
1. UNLESS OTHERWISE SHOWN ON THE DESIGN DRAWINGS, WHEN ANCHORING TO CONCRETE USE EPOXY ADHESIVE HIT-RE 500 V3 MANUFACTURED BY HILTI OR APPROVED EQUAL.
2. UNLESS OTHERWISE SHOWN ON THE DESIGN DRAWINGS, WHEN ANCHORING TO SOLID GROUTED MASONRY USE HILTI HIT-HY 70 MASONRY ADHESIVE ANCHORING SYSTEM WITH HILTIHAS E-55 GALVANIZED THREADED ROD OR APPROVED EQUAL.
3. UNLESS OTHERWISE SHOWN ON THE DESIGN DRAWINGS, WHEN ANCHORING TO HOLLOW MASONRY OR MULTI WYTHE BRICK, USE HILTI HIT-HY 70 MASONRY ADHESIVE ANCHORING SYSTEM WITH HIT-SC MESH SLEEVE AND HILTI HAS E-55 GALVANIZED THREADED ROD OR APPROVED EQUAL.
4. DIAMETER OF HOLE, CLEANING, AND INSTALLATION OF THE ANCHORS SHALL BE IN STRICT ACCORDANCE TO THE MANUFACTURER SPECIFICATIONS. CONTRACTOR SHALL ARRANGE FOR A MANUFACTURER'S REPRESENTATIVE TO PROVIDE ONSITE INSTALLATION TRAINING.
5. HOLES SHALL BE DRILLED WITH A ROTARY IMPACT HAMMER DRILL USING CARBIDE-TIPPED. ALL HOLES SHALL BE DRILLED PERPENDICULAR TO THE SURFACE.
6. POST INSTALLED ANCHORED RODS AND REBAR SHALL BE TESTED AS FOLLOWS:
 - 10% OF THE POST-INSTALLED ANCHORS TO CONCRETE, WITH A MINIMUM OF TWO (2) SHALL BE FIELD TENSION TESTED TO 100% OF STRENGTH DESIGN CAPACITY AS PER MANUFACTURER'S PUBLISHED TEST DATA GUIDELINE.
 - 10% OF THE POST-INSTALLED ANCHORS TO MASONRY, WITH A MINIMUM OF TWO (2) SHALL BE FIELD TENSION TESTED TO 1.5 PUBLISHED ALLOWABLE CONCRETE/PULLOUT/BOND CAPACITY AS PER MANUFACTURER'S PUBLISHED TEST DATA GUIDELINE.
- REMOVAL AND REPLACEMENT OF FAILED TEST ANCHORS: REMOVE ALL ANCHORS AND DOWELS THAT FAIL THE FIELD TEST IN ACCORDANCE WITH ANCHOR MANUFACTURER'S INSTRUCTIONS AND WITHOUT DAMAGE TO THE SURROUNDING SUBSTRATE. RESTORE ANCHOR HOLE USING NON-SHRINK GROUT AFTER ANCHOR REMOVAL.
- TESTING OF ANCHORS IN CONCRETE SHALL BE AS PER ASTM E488. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANCHOR TESTING AND SHALL SUBMIT RESULTS TO THE ENGINEER FOR REVIEW.

THE MINIMUM CLEAR COVER FOR REINFORCEMENT – BARS SHALL BE ONE BAR DIAMETER OR THE VALUES TABULATED BELOW, WHICHEVER IS THE GREATER	
SLABS (EXTERIOR)	2"
SLABS EXPOSED TO LIQUIDS	2"
GIRDERS & BEAMS (EXTERIOR)	2"
SLABS (INTERIOR)	3/4"
GIRDERS & BEAMS (TO STIRRUPS) INTERIOR	1 1/2"
TIED COLUMNS & PIERS (TO TIES)	
SURFACES EXPOSED TO EARTH & WEATHER	2"
OTHER SURFACES	1 1/2"
FOUNDATION ELEMENTS	
FORMED SURFACES	2"
SURFACES PLACED AGAINST EARTH	3"
WALLS	
SURFACES EXPOSED TO EARTH & LIQUID	2"
SURFACES EXPOSED TO WEATHER	2"
OTHER SURFACES	1"

NTS (UNLESS OTHERWISE NOTED)

NTS (UNLESS OTHERWISE NOTED
PLAN, SECTION, OR DETAIL)

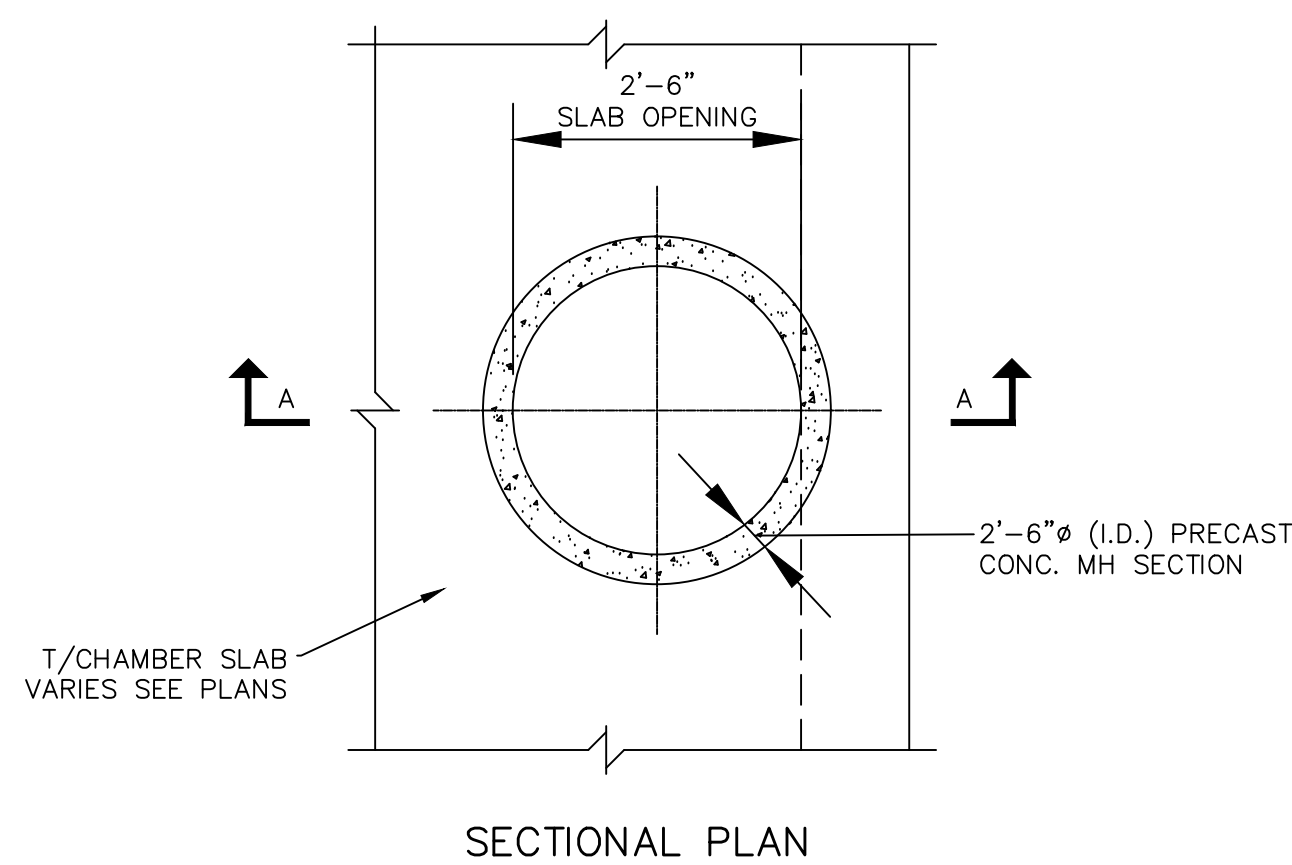
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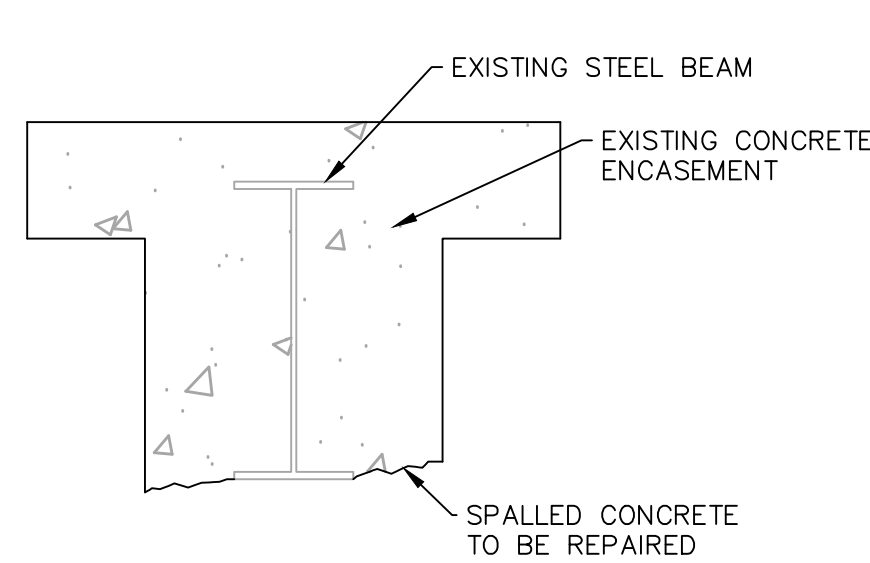
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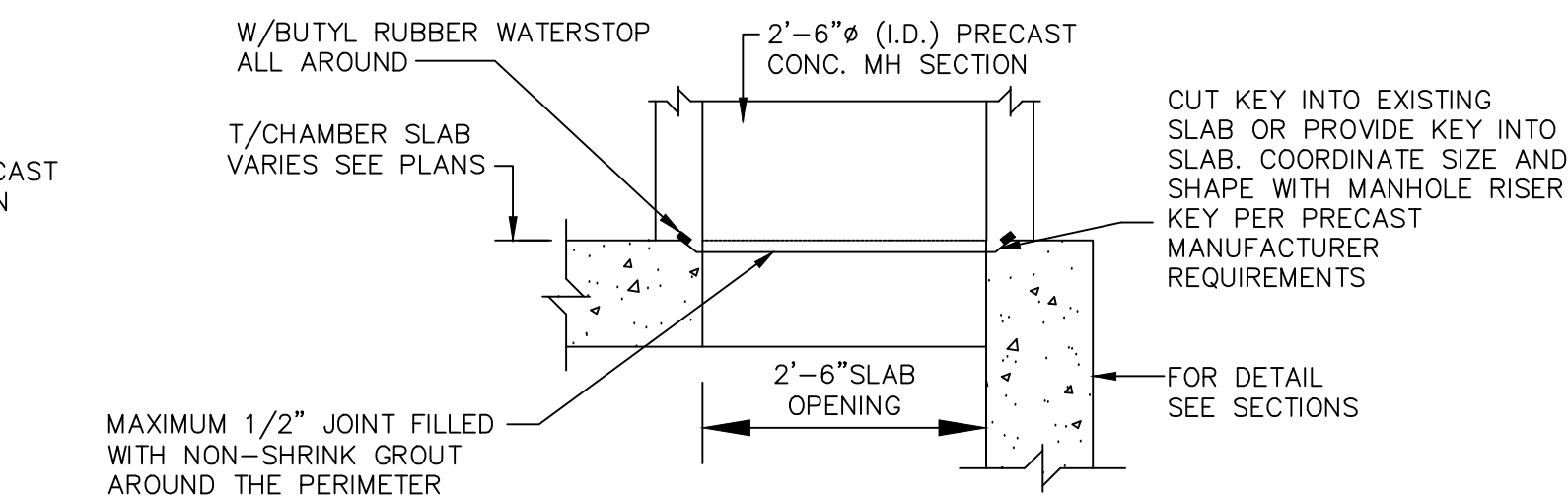
SECTIONAL PLAN

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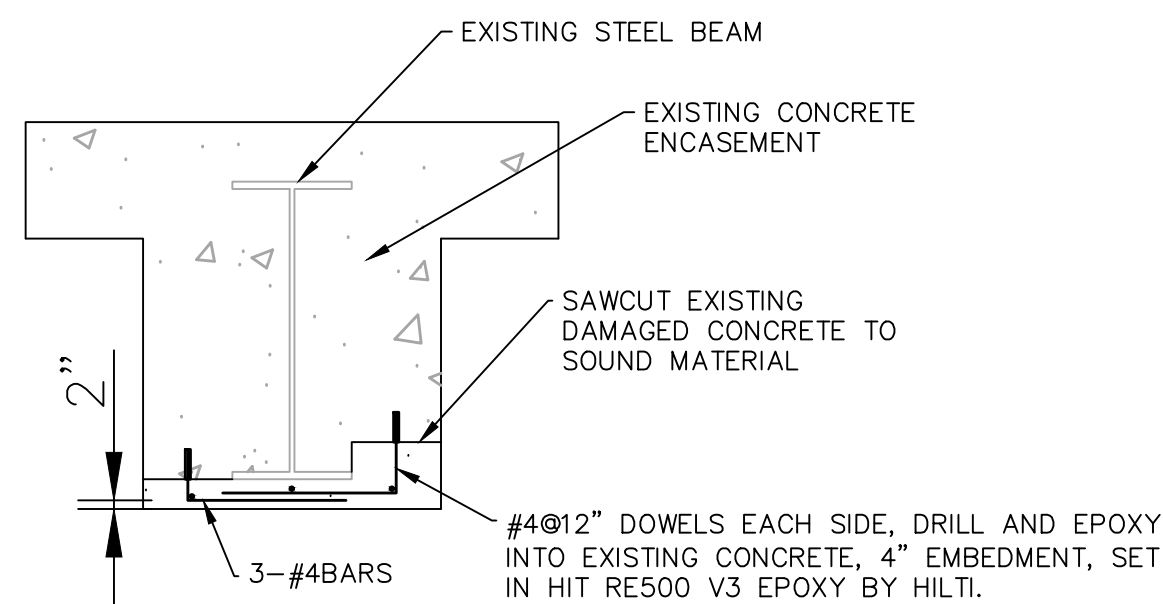
EXISTING CONDITION



SECTION A-A

NTS

NTS



REPAIR

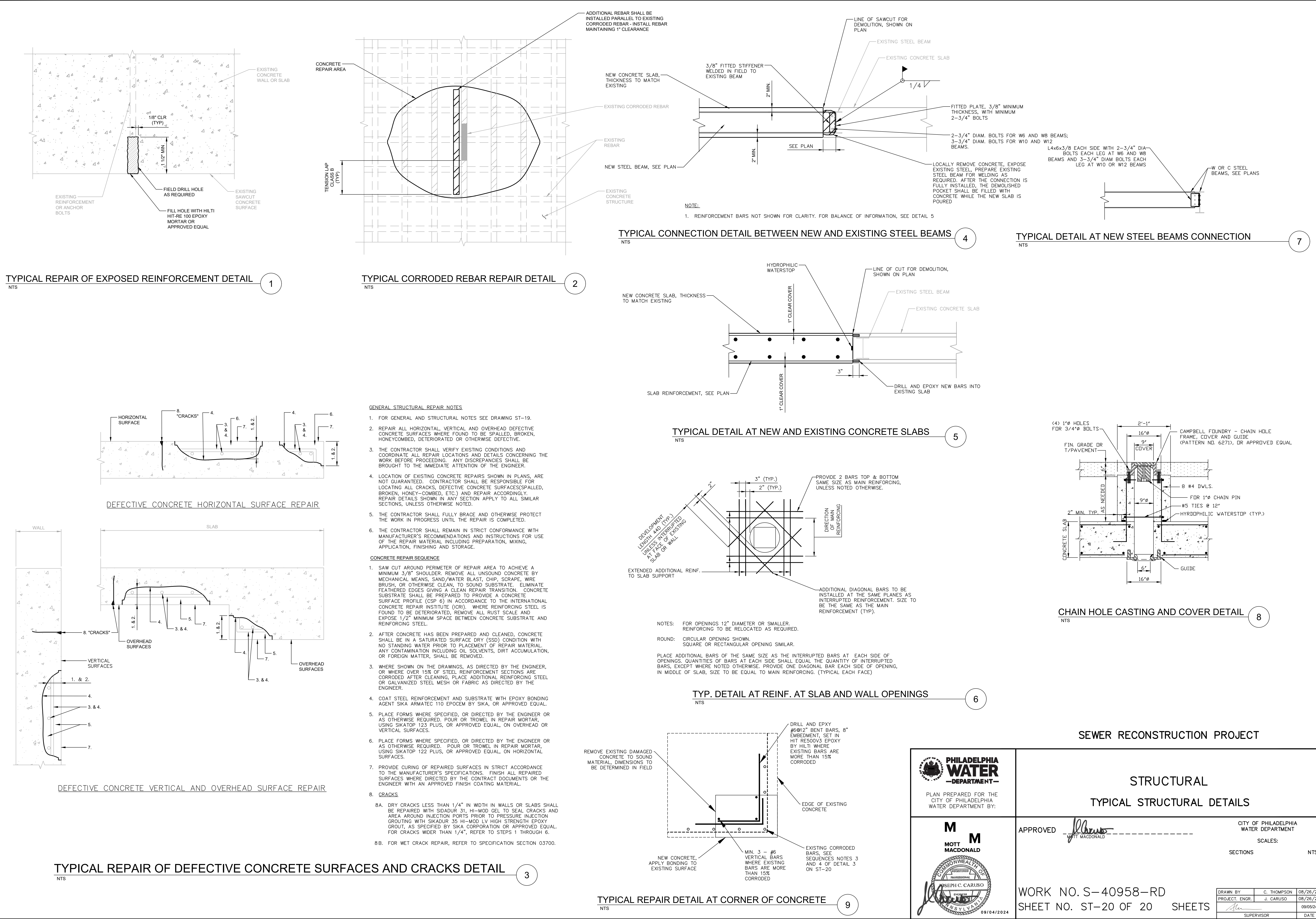
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5

SEWER RECONSTRUCTION PROJECT

 PHILADELPHIA WATER —DEPARTMENT—	STRUCTURAL TYPICAL STRUCTURAL NOTES AND DETAILS												
PLAN PREPARED FOR THE CITY OF PHILADELPHIA WATER DEPARTMENT BY:	CITY OF PHILADELPHIA WATER DEPARTMENT SCALES:												
M M MOTT MACDONALD 	APPROVED  _____ SECTIONS NTS												
09/04/2026	WORK NO. S-40958-RD SHEET NO. ST-19 OF 20 SHEETS <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <tr> <td style="width: 33%;">DRAWN BY</td> <td style="width: 33%;">C. THOMPSON</td> <td style="width: 33%;">08/26/24</td> </tr> <tr> <td>PROJECT ENGR.</td> <td>J. CARUSO</td> <td>08/26/24</td> </tr> <tr> <td colspan="2" style="text-align: center;">  </td> <td style="text-align: center;">09/04/2026</td> </tr> <tr> <td colspan="2" style="text-align: center;">SUPERVISOR</td> <td style="text-align: center;">DATE</td> </tr> </table>	DRAWN BY	C. THOMPSON	08/26/24	PROJECT ENGR.	J. CARUSO	08/26/24			09/04/2026	SUPERVISOR		DATE
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TYPICAL REPAIR OF EXPOSED REINFORCEMENT DETAIL

TYPICAL CORRODED REBAR REPAIR DETAIL

TYPICAL CONNECTION DETAIL BETWEEN NEW AND EXISTING STEEL BEAMS

TYPICAL DETAIL AT NEW STEEL BEAMS CONNECTION

TYPICAL DETAIL AT NEW AND EXISTING CONCRETE SLABS

TYP. DETAIL AT REINF. AT SLAB AND WALL OPENINGS

CHAIN HOLE CASTING AND COVER DETAIL

DEFECTIVE CONCRETE VERTICAL AND OVERHEAD SURFACE REPAIR

TYPICAL REPAIR OF DEFECTIVE CONCRETE SURFACES AND CRACKS DETAIL

TYPICAL REPAIR DETAIL AT CORNER OF CONCRETE

SEWER RECONSTRUCTION PROJECT

STRUCTURAL
TYPICAL STRUCTURAL DETAILS

APPROVED 

CITY OF PHILADELPHIA
WATER DEPARTMENT

SCALES:
SECTIONS NTS

WORK NO. S-40958-RD
SHEET NO. ST-20 OF 20 SHEETS

DRAWN BY	C. THOMPSON	08/26/24
PROJECT ENGR.	J. CARUSO	08/26/24
SUPERVISOR		09/05/24
DATE		

